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VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

HEARINGS

BEFORE THE

GENERAL SUBCOMMITTEE ON EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR

HOUSE OF REPRESENTATIVES

NINETIETH CONGRESS

SECOND SESSION

ON

H.R. 8525 and related bills

A BILL TO AMEND THE VOCATIONAL EDUCATION ACT
OF 1963

HEARINGS HELD IN WASHINGTON, D.C.,
JANUARY 31 AND FEBRUARY 1, 1968

PART 3

Printed for the use of the Committee on Education and Labor
Carl D. Perkins, *Chairman*

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VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

WEDNESDAY, JANUARY 31, 1968

House of Representatives,
General Subcommittee on Education
of the Committee on Education and Labor,
Washington, D.C.

The subcommittee met at 9:45 a.m., pursuant to call, in room 2175, Rayburn House Office Building, Hon. Roman C. Pucinski (chairman of the subcommittee) presiding.

Present: Representatives Pucinski, Carey, Meeds, Scheuer, Hawkins, Quie, and Dellenback.

Also present: John Jennings, counsel; Charles Radcliffe, minority counsel; Sharlene Pearlman, education director; Mattie Maynard, clerk; and Michael Murray, research assistant.

Mr. Pucinski. The committee will come to order.

This morning we are going to resume hearings on H.R. 8525, the Vocational Education Improvement Act of 1967. We held extensive hearings on this legislation last year before the first session adjourned. The committee feels that we ought to have additional information. We continue to be concerned over the fact that a large number of young people in this country are dropping out of school and are unemployed simply because they are not getting what we believe is the right kind of education.

It is our hope that with the development of testimony before this committee we will be able to make some contribution to legislation this year which will afford local schools an opportunity to develop curriculums which will give every youngster in this country a marketable skill upon graduation from high school.

Our first witness this morning is Dr. Leon M. Lessinger, the district superintendent of San Mateo Union High School, San Mateo, Calif.

Dr. Lessinger, would you step forward and make yourself at home and proceed in any manner you wish?

Mr. Hawkins, do you have anything to add?

Mr. Hawkins. Nothing at this time, Mr. Chairman.

Mr. Pucinski. If you will proceed, Dr. Lessinger, there will be other members joining us as we go along in the morning. Some will be leaving and others will be joining us, and I might point out to you that our Education and Labor Committee has a whole series of hearings going this morning so our members are divided between the various subcommittees. I hope that you will not construe the lack of attendance as a lack of interest in your testimony, because what we do is to send this record to all the members of the committee and their staffs and they carefully review it.

We want to welcome you here. I understand that you have some very exciting things happening in your high school in San Mateo and I wonder if you would proceed in any way you wish, Doctor.

STATEMENT OF DR. LEON M. LESSINGER, DISTRICT SUPERINTENDENT, SAN MATEO UNION HIGH SCHOOL

Mr. **Lessinger**. Thank you very much. I think first of all I would like to express my own thanks for the opportunity to be here. I haven't done this before, so I would just apologize for one thing. I just came off the Red Eye Special, as it is affectionately known, and if I appear to be incoherent at times it is because I am probably half asleep, having flown all night.

Mr. **Pucinski**. I am sure that Congressman Hawkins, who makes that trip very often, will probably fully appreciate your problem.

Mr. **Hawkins**. I sympathize with him.

Mr. **Lessinger**. You are from Los Angeles, aren't you?

Mr. **Hawkins**. Yes; same time, though.

Mr. **Lessinger**. My time is now 7 o'clock. The thing I am going to try to tell the committee is rather complex and rather than oversimplify it I have tried to give you several documents, which I hope you have before you, and I would like to just enumerate those and then put them aside.

I have a prepared statement but I won't read from it except to highlight it and then hopefully you might have some questions that you would direct toward me.

In the abstract of what you have before you, I just simply make several points which are painfully obvious to me as a school superintendent. One is that we still separate general and vocational education.

In the modern terms of the teenager, we are hung up on this thing, and have been for too many years. We still consider vocational education inferior to general education. It is part of the practitioner's viscera almost, part of his training. We don't give students who enter the vocational program, and these are not uniformly of high quality, the academic skills they need to enter college, and I think we have to wrestle with the fact that all programs these days ought to be college preparatory.

If one will entertain the notion of college as we do in California as postsecondary education to include junior colleges, business colleges, and this sort of thing and I don't think this is stretching it too far; that is, every program at the high school level ought to lead somewhere and even the job itself can be a post-high-school educational program, and in fact is increasing——

Mr. **Pucinski**. What you are saying, Doctor, then is that you can't separate the high school curriculum from the postsecondary curriculum. You feel that they should be closely related.

Mr. **Lessinger**. They should be interrelated, right, and I think we have to get away from seeing vocational programs as terminal programs. That is a terrible word. They have to lead somewhere.

What I am going to say this morning hopefully will show how it can happen. And I think there is another side of this coin. We have not seen the necessity for college prep students, so-called, to have vocational experiences.

What we forget is that most of our youngsters who go to college go through a revolving door; that is, of the youngsters, for example, who go to junior college in California I think between 40 and 60 percent are there under one semester and so you have simply delayed the dropout time by one semester and I don't think you have achieved very much unless you have given them some vocational experiences.

One of the reasons, and I indicate that in that first paragraph, is that the searcher for a comprehensive high school, a high school that successfully combines general and vocational education for all students, is best cautioned to expect disappointment, and in all the United States there is none.

That is a terrible indictment to make and one that unfortunately I can support. We just don't have comprehensive high schools, but we have the desire to achieve them.

Now, why? Obviously this is a complex issue, but one of the critical reasons why we don't have them is lack of appropriate resources, and I would make the further claim that we probably can't muster enough resource to create truly comprehensive schools.

What I would like to offer the committee for its thinking is the notion of a comprehensive school district and I would use for you a model that has been proven very successful in colleges.

If you would go to the Claremont colleges in California, and Congressman Hawkins knows these, you would find a banding together of independent colleges to achieve what can happen at a university. If one views the high schools of a district, or any of the schools for that matter, as somehow being placed in an organic relationship one to another so that in effect you achieve a comprehensive district, each supplementing one another and not duplicating one another, you begin to multiply your resources by a fantastic figure.

Let's see how this might work and does work in my district in a practical sense. We have seven high schools. Each is a regular high school offering a typical high school program leading toward the colleges, universities, junior colleges, and whatnot, but each in turn specializes in some vocational program.

One school, for example, specializes in the electronics field. At another one we are constructing a paramedical program. This is a vast field of occupational choices that has to do with medicine, and we are tied in here with a hospital, everything from nursing to premed with actual experiences in the hospitals.

We have a program of food technology which gives everything from dishwashing on up to possibilities to go to Cornell and get a doctorate in hotel management.

These are all open-ended programs. Any youngster then can go to one school, his neighborhood school, and then, through busing, and hopefully soon through electronic aids, can get the vocational experience for part of the day.

We are even conceiving of splitting up the year so that we can get several weeks at one school and several weeks in another. This is not a new idea. It has some interesting implications for integration too because there you move youngsters for tasks and not simply for the sake of mixing, and this is a plus in my judgment.

I would like to introduce along with this notion of the comprehensive district another phenomenon which I would place before you. It seems to me as I have listened to people and read articles that in the field of vocational education we choose up two sides.

One side I would call the Heraclitians after the great Greek philosopher Heraclitus. You remember—the man who said you never can step into the same river twice.

People who believe this in vocational education are those who say you really can't train young people for vocations because everything is changing. If you are going to teach them something now, 5 years or 10 years from now there won't be any jobs in that area.

I call these the Heraclitians. Then there are those in the other school of thought who are almost diametrically opposed. I call these the Watsonians, after good old John B. Watson, who said he could do anything to anybody if you gave him enough time.

The Watsonians can be characterized as those in vocational education who would make the point: "Don't worry about all of that. That is philosophy. Let's train students now for jobs that exist and if the jobs cease to exist let's haul them back and retrain them."

The Congress has passed MDTA, and this I think is basically that kind of philosophy and has some merit. I think that both positions have some truths but neither position can be adequately defended alone.

I would like to offer for your thinking a position which to me encompasses both and makes more sense out of both. I think it is true that jobs change. I think it is true that we really cannot predict what we will need in 1980 and the year 2000. I think it is true that you can retrain people but at some cost to them as people.

But what if we would look at the occupations, the vocations now, and find certain things that are stable, certain things that haven't changed in 600 years and with a high probability they will be exactly of vocational education which are absolutely stable. They haven't changed in 600 years and with a high probability they will be exactly the same in the year 2000.

If this reasoning makes any sense, what I am saying is if you would look at medical technology, engineering technology, food technology, business technology, and the vocations that support them, you would find some highly stable things that characterize all of these things, and these things that haven't changed are the things we should be teaching, so that if the job changes there is a high transferability.

Let me illustrate this with some concrete examples. If you look at what a medical technician does, you will find that he handles data. The data in this case might be blood samples, urine samples, heartbeats, electrocardiograms. It is essentially data. These data are gathered either through the eye; through observation, or through highly exciting ways, electronically and whatnot. These data then have to be organized.

Here is where your mathematics comes in, your tables, the highly involved mathematics of handling data. Here is where you need your English, your technical writing. Decisions have to be made on the basis of the data that is gathered.

By the same token, if you look at engineering technology, what do you find people doing? Gathering data. It might be soil samples, it might be hard core samples, that is, gathering data. They process the data, write technical reports, make judgments. It is a whole stable set of behaviors that underlies all of these different-appearing vocations.

What we have done in my district is illustrated in a pamphlet I gave you. You can refer to it, the one that says "Technical High School Education in a Changing World." You will see two of these programs that you could visit right now. They are existing. One is an aerospace pretechnical training program and, Mr. Pucinski, this is the one where all of these tie into the junior college. These are 11, 12, 13, 14 programs, so they lead somewhere, but if the youngster chooses to get off at the end of high school he has something that is marketable and yet it is a college preparatory type of program.

Now, if you look through this thing you find some interesting implications. The youngsters studying aerospace are excited about it. This motivates them. This is critical. We need this kind of education.

But what they are actually learning, you see, is how to handle data, how to process it, the mathematics of it, how to write up what they find and how to make judgments. Let's assume that aerospace is not here in 1980, which is highly unlikely. They would still have the necessary skills and understanding which would carry over into some other occupation.

Similarly in our physical-fitness laboratory they appear to be working in medical technology, and they are, but actually they are learning the fundamentals; how to work with mathematics, English, and so forth.

There is an interesting side here. This has tremendous motivational value. The youngsters in the physical fitness laboratory tested our band that went down to the Rose Bowl parade and they found, among other things, that girls are terribly unfit. Of course, the youngsters wanted to study them first, for some reason—I don't know why—but discovered that our physical education program had an effect on the girls that was exactly the reverse of what we thought.

As I talked to one of these technicians he asked me if I could give any reason as to why this happened, why it is that ninth-grade girls are more physically fit than 12th graders after 4 years of physical education. I then asked him that question and the youngster said to me, "Have you ever seen the way girls play?"

I said no, I hadn't been out on the field recently, so he took me out and, of course, there were the girls playing softball and they would catch the ball once in a while or not depending upon their whim.

Anyway, the notion of using students as technicians with the possibility then of putting them into some useful work is something to consider. It is possible by means of this kind of program to get high motivation and socially useful work.

I think that is about all I want to say as a message, simply that it is possible to achieve vocational education in the high school in some relationship to general education, which makes sense, but it isn't going to happen unless you bring district support.

In other words, it cannot be achieved solely in a single building. If you would look at, when you have time to read it, this paper if—I can find one place here and then just simply stop and ask if there are any questions—on page 4, I make this statement:

> What is impossible economically for a single small unit may be possible for several such units which are organized properly for the task. It is possible to link several high schools so that their respective curricula are supplementary to one another, rather than being so many duplicates of one uniform high school curriculum. In this way they are able to provide a vastly more comprehensive program than any single high school can provide by itself.

Perhaps you will be interested, too, in another concept we have which is what I call zero-reject education as against the typical kind of education that we seem to have in the vocational arena and in general education. You might, if you have it before you, take a look at this other pamphlet I gave you. It is called "Toward an Exemplary American Comprehensive School District with a Zero-Reject Tradition."

Do you have a copy of that? If you would open that you will see the school district I am referring to that has the San Francisco Airport in it and you see our high schools there, Crestmoor High School on the north, running down through Capuchino, Mills, Burlingame, San Mateo, Aragon, and Hillsdale with the proposed one at Marina.

These are the high schools that I referred to that are linked together as though they were one organic whole. Each has a function with respect to the others. In the new one, for example, we would hope to see develop marine sciences. I think you may be interested in some of the concepts that are illustrated in this booklet.

We have a human potentials laboratory, for example, where we begin to study youngsters' strengths instead of weaknesses, what they can do, not what they can't do, and then this notion of the zero-reject tradition. I simply want to illustrate that and then I will close.

If you would try to find a symbol which most nearly characterizes much of our reduction you would discover that the best symbol that you could apply would be the normal curve of probability. I don't know how familiar you are with this. This is the bell-shaped curve that makes us feel happy if we have so many A's, so many B's, so many C's, D's, and F's. I submit to you that in certain areas like reading, writing, arithmetic, and some knowledge about our Nation and so forth, this kind of symbol is no longer adequate.

We simply can't get by with C, D, and F education. What I am suggesting here is that for certain of these critical areas we need a zero-reject tradition, and I will illustrate it just in one way and it is described in this booklet.

This has real vocational implications because we know that reading is a vocational subject, among other things, and what we are doing in my district is creating reading laboratories and they are described here. I will give you an example of how it works. Every student in the ninth grade—Iwould hope that you won't ask me why it isn't done in the elementary grades. I simply take youngsters where they are. We have too many youngsters incidentally with high school diplomas who can't read, and you are all familiar with that, and this is disgraceful and has real vocational implications.

We take every single ninth grader into this reading lab. We measure them. On standard reading tests in one semester we took the bottom half of the class as measured on that test and we raised 85 percent of them to the median. We took the 15 percent who were still below the median and we worked with them in a variety of ways, including a 1-to-1 relationship.

We have a board policy which states that no youngster will get a diploma who cannot read, and this is described to specification. We have some youngsters now, 2 years later, who are still working hard to learn to read and I can conceive of a youngster spending 4 years learning to read.

It seems to me that to fail to have this kind of a zero-reject approach is to make a mistake, so the beginning of vocational education in the comprehensive school starts with the fundamentals that make for a variety of possibilities regardless of where you go.

With the motivation built in—it might be aerospace, it might be food technology, it might be electronics, these being spaced out around your district—it becomes possible to have an organic vocational program. It demands for its composition, some relationship with the schools one to another, because it is awfully expensive. You can't do all of these things at one plant; and then for the last point, you must try to focus on stability, the things that aren't going to change.

You provide the motivation by getting students involved in exciting things, airplanes, electronics, medicine, but what you are really after are the underlying behaviors that make for nonobsolescence, the behaviors that are going to be around 10 years from now, 20 years from now.

And how do you know that? Basically these behaviors haven't changed at all, and I illustrated this in the material I gave you. That is essentially it, Mr. Chairman.

(The statement referred to follows:)

STATEMENT OF LEON M. LESSINGER, SUPERINTENDENT, SAN MATEO UNION HIGH SCHOOL DISTRICT

ABSTRACT

We will tolerate an educational system which:

(a) separates general and vocational education;

(b) considers vocational education inferior to general education;

(c) does not give students in the vocational program the academic training necessary for entry into college;

(*d*) does not provide college preparatory students necessary vocational experience. In short, as a nation we have failed to achieve comprehensive schools.

In this presentation, I discuss this failure, the operation of comprehensive school *districts* to provide a coordinated curriculum in which vocational and general education programs reinforce each other, some of the key elements which make this possible, and a national plan called ES '70 which ties federal, state and local educational agencies into a massive research and development effort to achieve comprehensive schools.

The searcher or a comprehensive high school, one that successfully combines general and vocational education for all students, is best cautioned to expect disappointment. In all the United States there is none. Why?

There is little mystery about the causes of this situation. The reasons center about social attitudes, teacher training, unclear goals, particular professional traditions and inadequate resources. Whatever the reasons, the results are clear: Our high schools, largely, continue to be college preparatory institutions using an increasingly irrelevant curriculum to prepare some students to continue their formal education in a narrow range of four-year colleges.

There are few educational inventions that American can claim as uniquely her own. The idea and the initial attempts at creating the comprehensive high school is such an invention that the achievement of such an institution has proved elusive is hardly surprising. Comprehensiveness, after all, is an ideal. It is in the nature of an ideal to prove elusive. Nevertheless, the gap between the ideal and the reality is too large when measured against present capability and desire to achieve it.

Here and there cases are beginning to form in what is otherwise an "innovative desert" but thus far the efforts have been fragmented, undernourished, poorly planned and inadequately managed. Like the early stages of World War II, we have been too late with too little.

Over three centuries have passed since the American common-school system had its birth. From the beginning, our people have believed deeply in education and often have sacrificed much to obtain its advantages. That traditional belief and willingness to sacrifice is stronger today.

The 1970's will mark the centenary of the entry of the first public, tax-supported high school into the common-school system. What an appropriate time to muster the resources and the wisdom to see it also mark the achievement of the comprehensive high school.

The average citizen views college as *the* road to financial, social and personal success. At present, the college-preparatory program enjoys such a high status position that students not in such a program tend to feel inferior. Furthermore, developments in improving the educational process for college preparatory students stand in marked contrast to the lack of innovation in programs for the general or average student. It ought not to be surprising, then, to learn that many general or average students, the majority of our student bodies, are vague about educational planning, uncommitted to learning and uncertain about future goals and vocational opportunities. This is particularly vexing at a time when technological advance is having its most destructive impact on precisely the group for which our educational system is least effective.

Some aspects of this problem are currently receiving a good deal of attention. The increased emphasis during the last few years on the culturally disadvantaged child is a case in point. At best, however, such efforts have been largely sketchy and uncoordinated. These has been no systematic, comprehensive development of solutions to problems. Yet it is evident that the increasingly rapid growth of our technology and our expanding economy are going to accentuate educational problems and intensify the need for solutions.

In a modern society, formal education stands directly between a person and his ability to support himself and his family. If the quality or the appropriateness of any child's formal education is poor, what might have been a roadway to opportunity will remain a barrier. To fail to fulfill a responsibility in this respect means to render a large proportion of the future citizens of this country economically obsolete.

The educational philosophy of this country has traditionally been one that encompassed both vocational and general education. Secondary education in its early form was designed to provide students with their cultural heritage and, at the same time, to prepare them to enter a profession or to engage in further training leading to a profession. The goal was both cultural and vocational.

Spokesmen for the American public schools once boasted that the system was designed to educate the children of all the people. The dream was never translated into reality. With the passing of time, greater and greater numbers of children attended high school, and two different types of students with different sets of goals emerged. The first set of goals centered on college preparation for the relatively gifted student. The other set of goals lost sight of the vocational. For the college-bound student, high school provided a general education and, at the same time, prepared him for the next step in life—going to college. For the non-college-bound student, high school provided a general and cultural education for many who had never before had it, but failed to lend reality and motive to the program in that it did not prepare him for the next step in life—taking a job.

As recently as five years ago, half the population of this country failed to complete high school. Today, the figure is one out of three. These boys and girls who leave before completing at least twelve full years of formal education represent, to paraphrase a famous novelist, "an American tragedy." They are the unschooled, the unskilled and the unemployed. Nor is this the full extent of the problem. Inappropriate education, creating the "in-school dropout," is adding an untold number to those who will be non-productive and poorly equipped for modern life.

Traditionally, thinking of students in two categories—the college-bound and the non-colleged-bound—has led to the tracking of programs in such a fashion that there has been little regard for the special needs of students within the broad classification of non-college-bound. All too often the track for these students has led to an educational dead end.

One answer to this problem, a way to "marry" vocational and general education, is the comprehensive school district. What is impossible economically for a single small unit may be possible for several such units which are organized properly for the task. It is possible to link several high schools so that their respective curricula are supplementary to one another, rather than being so many duplicates of one uniform high school curriculum. In this way they are able to provide a vastly more comprehensive program than any single high school can provide by itself.

Students differ one from another in a bewildering set of ways. They differ in height, weight, color of hair, motivation for school, aptitude for learning, cultural background, physical agility, etc. Although many of the ways in which they differ have little significance insofar as their schooling is concerned, there are a number of differences which have a decided importance in this respect. These are clearly demonstrated in measures of intelligence, interest, physical fitness, creativity, leadership, motivation, self-reliance and the like in relation to school achievement.

Since the beginning of educational measurement, no fact has been more apparent than the great variability in the aptitude and achievement of pupils in the same grade. In response to this fact, schools group pupils, adopt multiple sets of textbooks for the same subject in a given grade, employ specialized teaching personnel, etc. Legislatures have enacted quite a number of programs to take some of these differences into account, including the allocation of additional funds for the mentally gifted, the mentally retarded, the physically handicapped, the culturally disadvantaged and the educationally handicapped.

Yet, in spite of all the emphasis on individual differences, public schools still fail to meet individual needs. Paradoxically, the reason is that there is a general lack of recognition that students tend to have the *same needs*. It is only that their individual differences make it necessary to meet these similar needs among students in different ways. It is unfortunate that many teachers tend to equate individual difference in ability with individual difference in need. The educatonal values set for the academically gifted are considered irrelevant to the below-average student.

Each student is first of all a person. As a person he shares with all other persons similar needs and desires. For example, students have basic physiological and safety needs. They want a place in their own group and effectionate relations with other people. They want self-respect and the esteem of others. There is mounting evidence that students will not view themselves as competent and worthy of respect if others do not see them in this light.

All students have a need for information and a need for understanding. Their world is complex and confusing. They need to have answers, to learn skills, and to be able to perform in approved ways.

Perhaps the most important need students have is their need to realize their unique potential. There in a growing body of evidence to support the idea that all that a person *can* be he must be if he is to be happy; the more he is capable of doing, the more he must do.[1]

In the beginning, a student who is slow in learning or disadvantaged is described simply as "slow in math" or "deficient in reading." However, before long he is categorized as "slow" or "retarded" in general. The particular area of deficiency is often forgotten, and the general worth of the student is considered diminished. Who is there among those who are familiar with school life who has not heard terms such as "reject," "retread," and "retarded" to describe one group of students and "superior," "bright," and "able" to describe others. Furthermore, the range of goodness and achievement accepted by many schools remains far narrower than that of the general society around them. Consequently, it is incumbent upon a school system to provide a great diversity of ways for students to succeed.

It must be communicated to our young people that all work is honorable—that they do not have to pursue a professional career to earn a respectable living.

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[1] This discussion is based on a description of Maslow's theory of needs as described in Anne Roe, *The Psychology of Occupations*, New York: John Wiley & Sons, 1965, pp. 25–29.

We must convey to them in word and deed, in program and method, in support and enthusiasm, that there are many jobs at all levels with dignity and worth. We must convince them that they can qualify for these jobs by preparing for and selecting among a variety of post-high-school training programs, such as one and two year business courses, training in the military, apprenticeship programs, community college programs and technical institutes, as well as college courses and university programs.

Seen in this light, it becomes reasonable to view the choice of an educational strategy by the student as an occupational choice in itself. The investment of time necessary to complete a selected educational program is, in fact, an occupational decision. To be comprehensive, a curriculum must be developed which is based on the recognition of this fact.

As we have seen, the first condition for operation of a comprehensive school curriculum is the establishment of diversity in those paths which the school will accept and promote for the achievement of success in education, using programs and processes which meet individual differences and similarities among students. A more complete description of the requirements for diversity in the program is now required.

An analysis of the marks given in any high school would show that approximately one-fourth to one-third or more of the student body receive barely passing or failing grades in important subjects. The use of the normal curve, wherein certain percentages of students receive A, B, C, D, and F marks, is widespread if not universal.

In a day when formal education was "nice to have," but important for only a few, this practice could be condoned. But today, when formal education is a road all must travel to prepare for successful lives, students must not be moved through the systems with a "D" or an "F" quality of education. What is needed is a *zero-reject* point of view—a desire on the part of all personnel to take responsibility to do whatever is necessary so that students may learn. This is particularly important in the fundamental tools of learning.

A zero-reject point of view symbolizes the conscious attempt to use a variety of instructional approaches to cut down failure and inadequate learning. Time may be varied, the place of learning may be varied, the approach and the materials may be varied, but the aim is singular—the success of the student in mastering the skills and knowledges necessary to function as a competent citizen and productive employee or employer.

Zero-reject education represents a break with past and present educational tradition. It is not far off the mark to describe our formal schooling process as a gigantic sieve slowly and inexorably shaking and sorting in mighty "graded convulsions" until the population mix that enters is packaged into well defined educational bins. Seen this way, we have achieved a reject educational tradition whose symbol is the normal curve of probability and whose function is to screen out and to separate.

But our times call for more than selection. We cannot abandon this function of our schools. Indeed, we must continually raise standards; but we must be aggressive in finding ways to bring students to meet standards with the clear recognition of many alternative avenues for continued learning.

Three questions must be answered by all schools.

a. Have all the students attained a basic standard of achievement in the fundamentals?

b. Do the students find their work to be interesting, challenging and rewarding?

c. Do the students know what to do after they finish schooling or what is expected of them?

Together, the answers to these questions reveal the most fundamental shortcoming of American Education; namely, that a high proportion of our youth leave school without having developed either the tools of learning, an interest in learning or an idea of the relationship of learning to careers. A zero-reject tradition addresses itself to these central issues.

Most everyone in American education would agree with and argue for the premise that every child should be offered opportunities to develop his inborn talents to the fullest degree of which he is capable. The zero-reject tradition would extend the motion of equality of opportunity to include the responsibility for equality of attainment in certain of the fundamentals of learning and the strategies of learning.

In a zero-reject tradition, the aim of the school is to lift students to meet standards rather than to reject them by assigning marks of inferiority or removing them from participation. Zero-reject is directed at motivating all school personnel and all those who affect the education of children to try alternative and imaginative procedures with those who do not meet standards. It follows, then, that schools with a zero-reject tradition will place equal emphasis on grading their educational system along with grading their students.

In the conventional school, only the more capable, college-bound students are instructed in mathematics such as geometry and trigonometry, or in the sciences such as physics and chemistry. Students who may, for instance, become truck drivers or beauticians tend to be sidetracked into different course content and, consequently, come to have little appreciation for many of the subject matter areas that are deemed most important in our complex society.

In a truly comprehensive school, on the other hand, every student would be given an opportunity to benefit from instruction in all subject areas to the extent that he is capable—and be guided and worked with until he gains an appropriate mastery of the essential areas. Each student would be instructed in the essential tools of learning and in an appropriate phase of every major subject matter area.

A comprehensive school district has three essential features:

1. It provides a program of instruction vastly more comprehensive than any single school would be able to afford by itself. This includes not only a phased curriculum in which every student is instructed at whatever level he is capable of mastering in every major subject matter taught in the district, but also special instruction for both high school students and adults who wish to acquire particular marketable skills or further their education in particular areas.
2. It provides for quality assurance of the educational product within the district through continuous surveillance of programs, teaching methods and materials and administrative procedures.
3. It provides for the development of new instructional programs to meet the demands of a comprehensive curriculum.
4. It provides a management system to make the above possible.

A comprehensive school district resembles in some respects the organization of a university, where students may take courses in more than one college or school within the university. The organizational structure of the district is designed so that a school may reach beyond its own curriculum to satisfy the needs of its students. Though each school should offer all of the programs for which the number of students is sufficiently large, particular schools within the district are designated to offer special programs for which the number of students is too limited or the specialized facilities and equipment required are too costly for offering at every school in the district. Thus, one high school might have a program unique in the district which would attract students from any other high school in the district. Each school might offer specialized and enriched experiences not appropriate for offering at every school, yet available to each student attending the school district.

The comprehensive school district may reach even beyond itself through making arrangements with nearby universities, state colleges, junior colleges, technical schools, industrial laboratories, business establishments, labor unions, etc., so that a total educational program becomes possible. Through arrangements with colleges and universities, particularly able and mature high school students may acquire college credits. Through arrangements with community citizens, technical schools, industrial laboratories, business establishments and labor unions, it becomes possible for students to acquire vocational training and work experience while still pursuing general education in the high school. Through a service curriculum, students learn adult models and have a means to enter the world of adulthood.

The comprehensive district also offers adult programs of a general and a vocational nature. The district provides educational counseling for adults in the community who desire to further their education and, through such interaction, establishes a basis for making an adult education program accommodate specific community needs.

For those students having problems in achieving a general education and for whom all of the alternatives available at a regular school prove inadequate, a continuation school is provided. This adjustment school, commonly called a continuation high school, is a small high school drawing its student body from the several schools in the district.

The program of the continuation high school consists of small classes where teachers use an individualized approach. Thus, the student is able to advance at his own rate and to gain the kind of immediate attention which is so vital to problem students, to those who must be painfully employed while they are in public school, and to those who have had interruptions in their education.

An analysis of most so-called comprehensive schools today would show that neither the present college preparatory program, the present vocational or industrial arts program, nor the present general or "cafeteria style" noncollege preparatory program provides satisfactory prerequisites for the great range and diversity among post-secondary school opportunities.

Informed opinion regarding the role of the high school in professional, technical and vocational education seems to fall into two camps. One position might be described as the camp of the Greek, Heraclitus, and the other, the camp of the American behaviorist, Watson. The Heraclitians hold to the belief that there is no reality but change—that the impact of automation and charge in technology are such as to make it impossible for schools to impart any training except that of general education in English, the sciences, mathematics, etc. The Watsonians, on the other hand—in the great American tradition of optimism—are interested in simulating some of the more important present occupations at the high school level in the belief that youth with immediate saleable skills can be gainfully employed, and, when necessary, retrained to meet changing conditions. They hold to the belief that youth soon to enter the labor market will hold two, three and even more careers before they retire from the labor market, and that it is the responsibility of the schools to train them for at least the first of these.

It would appear that both the Heraclitian and the Watsonian positions have some merit, but that neither position is adequate by itself. Analysis of the occupational world indicates that both positions must be utilized in varying proportions according to the nature of the job family for which the pupil is preparing. More importantly, underlying all the professional, skilled, and technical occupations, lies a substantial set of behaviors which are remarkably stable and can be described and taught. It is this stable structure which should be analyzed and emphasized in the curriculum of the comprehensive school system.

Figure 1 illustrates the relatively fixed nature of technical and professional work methods. The model centers on the occupational team which society has already created to fulfill its professional, technical and vocational objectives. The four-level occupational team which has become increasingly typical of modern business, government and industry reflects the complexity of the current world of work. Formal educational training is required for entrance into appropriate job families. Thus, there are jobs requiring four or more years of college, jobs requiring some college, and jobs requiring a high school education only. While there are still jobs with lower educational requirements, these are relatively few and swiftly declining in number.

Figure 1 shows that the stable behaviors consist of at least twelve observable, definable, and teachable functions. Even though these functions are enumerated, it should not be assumed that they will necessarily be found or taught in this order. Indeed, experience has shown that any stage may be entered with subsequent work encompassing the other stages in any order which happens to be appropriate. Let us consider the twelve functions in terms of curricular offerings.

Data procurement. Here, certain operations are performed to collect data. These operations may be very simple or very complex. They may involve such things as hunting for rocks, collecting specimens, obtaining soil samples from a civil engineer or receipts from an ongoing business. Or the operation may be more involved, such as designing and conducting an experiment.

Data observation. Observation might be subsumed under the procurement of data, for no data as such have been collected until observations have been made. However, observation is in many cases a distinct step in its own right and so is worth discussing separately. Observation may take a natural form; i.e., through use of the physical senses, or it may be aided through instrumentation. Instruments can be simple or magnificently complex, and can lead to highly instructive and motivating experiences.

Data recording. Students learn to record what they observe. Here again the experience can be relatively simple, through the use of paper and pencil, or highly complex and instrumented. As with observation, recording data may be logically subsumed under data procurement, but it is important enough to merit separate mention.

Data organization. Pupils learn to code data, tabulate them, graph them, and use simple statistics. The object of this stage is to prepare the data for the subsequent stages.

Data interpretation and reporting. In this stage, the pupil needs all the skill in analysis, synthesis and evaluation at his command. He also needs skill in technical writing.

Data evaluation and decision making. In this activity, the highest mental functioning is required. The pupil must make value judgments about data, and consider decisions which might be made on the basis of the evaluation.

Social sciences, history, economics, and philosophy. Here is represented the substantive contribution of the social sciences and humanities curricula for the students' use in making judgments and decisions. It can be readily shown that in a free society, the nature of decision making will differ from that in an unfree society, depending upon the value systems deriving from differing cultural heritages. Both the process and the outcome of decision making will differ. A crucial point here is that data in themselves are amoral. The morality is introduced from sources outside the technical experience.

Finance. This refers to the whole area of finance which must come into play if an enterprise is to function properly. All human activity has economic and financial implications. It is of particular importance that a student understand the tools and data which are necessary to the making of valid financial decisions.

The other stages. Here the student enters the world of management and production, sales and advertising, transportation and logistics, accounting and quality control. These areas of concern logically follow in any attempt to utilize the decisions made on the basis of an evaluation of data.

It may be helpful at this point to describe two examples to illustrate the stability of work method in a variety of different and changing fields. Pupils may be given soil samples secured from civil engineers preparing to build a housing project. Using chemical and mechanical procedures, the pupils can observe the soil samples, record what they observe, organize, interpret, and report their findings, and make judgments regarding the suitability of that soil for supporting the buildings. Their decisions will be influenced by economic factors such as site preparation, costs, methods of financing, etc.

In the medical field, students may take blood samples from animals, observe, record, organize, interpret and report their findings, and then render judgments based on conditions laid down in the original experiment. For example, the problem might be concerned with diet or routine. Again, decisions will be influenced by considerations arising from the bottom half of the circle in Figure 1.

This conceptual approach lends itself well to vocational education. Tasks may be formulated which are educationally relevant to the needs of all students. A further use of this conceptualization lies in the area of guidance. Data and problems arise from a multitude of different areas of the world of work. In the process of learning to handle data, pupils gain experience and knowledge about many different occupations.

It is easy to see that what has been described here is only the first plank in a sequential educational program that unites general and vocational education. The second plank might well consist of the establishment of specialized laboratories in each school where pupils can render useful service to the school as well as to themselves.

For example, schools might develop a physical fitness laboratory, a human potentials laboratory, a materials testing laboratory, etc. Pupils could take the skills and knowledge which they have gained through an understanding of the twelve functions described in Figure 1 and apply them to real situations which exist in the school and in the communities that surround them. To illustrate, a small, randomly selected group of students from the physical education program might be brought into the physical fitness laboratory, operated by students, and given tests of their physical fitness, involving the conducting of the tests (procuring data), making observations and recording data, organizing, interpreting and reporting the data.

Again, in the human potentials laboratory, pupils might experiment with optimal ways of improving memory, study skills and the like. In the materials testing laboratory, products to be purchased by the Board of Trustees might be subjected to analysis and recommendations made to the administration and board about the desirability of making a purchase. This kind of approach could lead to a third plank in the sequential educational program in which pupils who have served in the specialized laboratories could be given an opportunity to gain work experience in laboratories outside the school, in the community at large.

In summary, what is described above and presented graphically in Figure 1 is applied scientific method. Whereas the world of work is in a constant state of flux, some important aspects of the basic work method do not change. Were we to provide students with the knowledges and skills described, we would have made a major contribution to their post-high-school success. Young people handling data and problems from the "real world", as well as from carefully contrived experiments representative of types of occupational alternatives, would not only gain familiarity and competence in applied scientific method, and a familiarity with a whole host of professional, technical and vocational jobs, but would also gain experience in actual jobs.

The task of achieving a comprehensive high school is a complex one with a high probability that it can be achieved only within a comprehensive district. A few of the requirements of such a district have been described. Seventeen school districts distributed throughout the nation have banded together in a voluntary disciplined effort to achive for themselves comprehensive high schools by the mid-nineteen seventies.

Using the massive resources which accrue when human and material resources are pooled together with the support of the United States Office of Education, the seventeen districts have formed a national network of schools. The object of the network is to stage comprehensive programs before the educational community. This staging is to include new instructional materials and techniques, personnel training procedures, management skills and the like. The seventeen member districts include among them virtually every type present in the nation. Since the network school districts propose to become truly comprehensive, the title of the entire project has been called Educational Systems for the '70's (ES '70).

The old-time rural school occupied a large place in the social as well as in the intellectual life of the entire community. It was the center of much truly educational activity besides the formal exercises of the school. Here were held debates, community sings, educational contests and social affairs. In many communities the school served as a town center where new acquaintances were made, old friendships renewed, courtships begun and a thousand other advantages attained which would have been impossible without a common neighborhood meeting-place and social center. The school stood in an organic relationship to the community which nourished it. It was a part of the total fabric. The memory of the "little red schoolhouse" will rightly long be cherished among us as one of our dearest inheritances from earlier days.

If a high school program is to be relevant to all students, its curriculum must be coordinated with society in the same sense that it is now coordinated with the colleges and universities. This is a call for an "organic curriculum," an apt term invented by Morgan and Bushnell[2] for a program designed to accomplish this type of curriculum reform.

As they describe the curriculum, it should:

"1. Integrate academic and vocational learning by employing vocational preparation as the principal vehicle for the inculcation of basic learning skills. In this way learning could be made more palatable to many students who otherwise have difficulty seeing the value of a general education.

2. Expose the student to an understanding of the "real world" through a series of experiences which capitalize on the universal desire of youth to investigate for himself.

3. Train the student in a core of generalizable skills related to a cluster of occupations rather than just those related to one specialized occupation.

4. Orient students to the attitudes and habits which go with successful job performance.

5. Provide a background for the prospective worker by helping him to understand how he fits within the economic and civic institutions of our country.

6. Make students aware that learning is life-oriented and need not, indeed, must not, stop with his exit from formal education.

7. Help students cope with a changing labor market through developing career strategies which can lead to an adequate level of income and responsibility.

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[2] Robert M. Morgan and David S. Bushnell, "Designing an Organic Curriculum," Bureau of Research, U.S. Office of Education, 1967.

8. Create within the student a sense of self-reliance and awareness which leads him to seek out appropriate careers with realistic aspiration levels.

ES'70 has the same essential features as are present for a comprehensive district. This is the essence of ES'70.

1. It uses systems analyses and related tools both to specify as precisely as possible desired pupil learning in behavioral or performance terms and to define the experiences which will lead to the desired behavioral outcomes.
2. It provides for the development of new instructional packages to meet the demands of a comprehensive curriculum.
3. It provides for quality assurance of the educational product as specified through continuous surveillance of programs, teaching methods and materials, and administrative procedures. There are four essential functions of this quality assurance:
   a. The identification of weaknesses in courses, methodology, materials and teacher competency.
   b. The identification of gaps in the current curriculum.
   c. The identification of organizational deficiencies in achieving solutions to gaps and weaknesses.
   d. The identification of deficiencies in support from local staff and from the local community.
4. It provides the necessary management skills to carry out the research design together with a formal resolution of the proper roles of the local, intermediate, state and federal units. It is taking positive steps to ban the possibility of ever becoming a national or mandated curriculum.
5. It provides for the development of a program of instruction vastly more comprehensive than any single unit would be able either to afford or to build, while at the same time it provides for a staging of successful units as a totality within a given school or district.
6. It provides a reference group of schools and school districts so chosen that virtually every school and school district will find its counterpart or model from among ES'70 network members.

The ES'70 network of schools resembles, just as is true of the comprehensive district, in some respects the organization of a university. Each of its members may be likened to an individual college with the power vested in the combined colleges. Provision is made for the network to reach beyond itself through arrangements with universities, colleges, junior colleges, technical schools, industrial laboratories, business establishments, private foundations, etc., so that a total research and development educational program becomes possible.

I have not come here to grumble about American education or carp on any current mistakes. I have come to try to influence you to achieve what you already believe. With you, I am searching for a way forward and I invite you to join me in this quest.

Mr. **Pucinski.** Mr. Hawkins.

Mr. **Hawkins.** Yes. Mr. Lessinger, in this example that you have given us of this school system may I ask you a few questions about that?

Do I understand that each of these high schools is teaching a specialized skill of some kind; that is, each specializing in one particular field?

Mr. **Lessinger.** Which is unique to it.

Mr. **Hawkins.** I see. And I assume that college preparatory students go to these high schools also. There is no separation.

Mr. **Lessinger.** No. Each of them is a regular high school.

Mr. **Hawkins.** But with one speciality.

Mr. **Lessinger.** With one speciality available to all.

Mr. **Hawkins.** I see. How does an individual select a school? Does he select a school because of his desire to go to that particular school or specialize in that particular speciality?

Mr. **Lessinger.** He can. This is in the process of developing. This is now 4 years old and I can give you an example of how it is actually developed.

If you will look at San Mateo and Burlingame—do you see those two schools?

Mr. **Hawkins**. Yes.

Mr. **Lessinger**. On the hour every hour we run two shuttle buses back and forth, every hour. Now, youngsters then are enrolled in either school but have the advantage of being in both schools. Now, we have an eletcronics program at Burlingame. We have a beautiful lab. At San Mateo we have automotive services. A youngster at Burlingame can specialize in the automotive field.

Mr. **Hawkins**. Let's say there is a kid in the northern end of the district near the Peninsula High School. That kid can select to go down to Burlingame or to San Mateo.

Mr. **Lessinger**. Yes, in which case at this time he would have to be a full-time student because it is too far to go. My hope is, Mr. Hawkins, that eventually we are going to get a transportation network here. We are working with our city councils now trying to get some possibility.

I am also working to get some electronic help. But at the moment what you would see if you would come to the district is that we have linked Crestmoor, Capuchino, and Mills, for example. There is free interchange amongst those schools for part of a day.

It is possible to go to Crestmoor and then go down to either Capuchino or Mills for part of your day. This is what I mean by departmentalizing by district. You might take four periods at Crestmoor and in the afternoon have your specialized program at Mills or Capuchino.

Mr. **Hawkins**. Is the choice a completely free choice of the student, or is there some attempt made to distribute the students according to the potential load that a high school can carry? I am wondering just what do you do with the kid whose problem isn't to go to one school rather than the other but simply wants to go there because his girl friend is over there, or because he likes the football team, and so on, and not select it according to the specialty.

Mr. **Lessinger**. This is a good point. Remember, these programs begin in the 11th and 12th grade, so you have had ninth and 10th to work with the youngsters to do some good guidance in the way of what they want to explore, and each of the schools, remember, has a full curriculum, so they are getting samples of this down the line. That cuts down on some of this.

It isn't the easiest thing to spread yourself over two schools; that is, the youngster normally wants to stay in one. He has the school spirit and so on.

Therefore, motivation is what counts here. He goes to two schools because he is really interested in aerospace or food. This is the way it has worked out. We haven't had problems with too many going because of the girl friend and so on.

They have the ninth and 10th grades to get that kind of thing under their belt, and what we are trying to build is an 11, 12, 13, 14 type of program.

Mr. **Hawkins**. The ninth or 10th grade kid, I assume, goes to the school in his particular area.

Mr. **Lessinger**. Right.

Mr. **Hawkins**. It is there that the selection is really made as to which school he will eventually go to.

Mr. **Lessinger**. Right, and he gets enough exploratory experiences that he has some idea, and, of course, he has the option during the counseling program. He visits some of these places. We plan that.

In other words, he begins to know that at Aragon he can get the aerospace, at Capuchino he can get the physical fitness, at Burlingame electronics, at San Mateo the automotive, and so forth.

So he begins to get some notion about possibilities. He begins to talk with friends and so forth.

Mr. **Hawkins**. What is the choice of the student who wants to go, let's say, to college. Which one of these high schools would he select? Would he have that choice, or do you have one that specializes in college preparatory and not a skill?

Mr. **Lessinger**. No. They all are college preparatory schools and each of these vocational programs is a college preparatory program.

For example, if you go to Capuchino for the Project Feast—that is the food technology—when you take a Feast English, I think it is called, food technology English, again we focus on stability. You are learning the same English that you need for college. In this case we are talking about a junior college.

I think, Congressman Hawkins, you know that in California we can use that term, and I think proudly, to illustrate a whole variety of colleges, and remember that these colleges also have transfer possibilities so a youngster can go to the junior college and then to the 4-year college and then to the university, so that none of these programs is dead end. They all lead somewhere.

The youngster can go to any one of these schools and he can go to Stanford, Berkeley, or Harvard or wherever, if he has that kind of aptitude. If he chooses these vocational lanes he still can go to any college he wants to.

Mr. **Hawkins**. What has been the attitude of the parents to the busing around the district? Has there been any opposition on the basis that the kids tend to bus from one school to the other or from one area to a school perhaps some 15 miles away?

Mr. **Lessinger**. There hasn't been because, you see, again you are starting this in the 11th grade. The youngster is 16 or 17 years of age, and most of these youngsters, a good many of them, have their own cars.

One of the facets here too in California is you can drive at 16; so many of these young people have mobility, therefore, it isn't only busing.

Mr. **Pucinski**. That is why those highways are so clogged up.

Mr. **Hawkins**. Chicago is rather dangerous I found out recently.

Mr. **Lessinger**. But I have discovered now that the 16-year-old has considerable independence and if you have a good guidance program and if there is a reason for the busing, if it isn't just to mix, you have a good program. The parents, of course, are invited to visit and they get excited about this.

Mr. **Hawkins**. I think this is an extremely innovative idea. What other innovations are really included in the program that you are offering that are different from the traditional vocational or technical school? Is this the only innovation or have you done anything about, let's say, giving greater respect or attaching students to the vocational education type of value that is not degrading, or at least in the opinion of kids that it is not degrading, and just how do you accomplish this?

Mr. **Lessinger.** You put your finger really on the central issues and I have tried to point this out in the abstract under (b), "Considers vocational education inferior * * *."

Mr. **Hawkins.** Do you explain that in this statement?

Mr. **Lessinger.** Yes, I do, but I think I can emphasize it because I think you put your finger on the critical point. There are social stigmas that operate against the area vocational school.

If you would ask me right out should we have vocational area schools, you know, specialized schools as we have had in the past—in Los Angeles you remember Polytechnic High School. All of those have failed. Why? Because of social stigma brought on by the parents and the community at large.

This is an unlovely part of us, but it is there and it has to be reckoned with. One of the ways we get around this, and there are several ways—I gave you a paper on the service curriculum, and I don't know if you have that in front of you—is we have embarked on a very interesting partial answer to this and what I am trying to convey is that you really can't give simple answers. This is what I mean by the comprehensive district.

You have a lot of things going to make these things possible. One of the things we do, which is highly innovative under a title III project of ESEA which the Congress passed, is to operate an educational resources center, and you will see it described in this booklet.

We call it Know and Care. We were able to get 6,000 residents of our particular area signed up as friends of the district. For example, if you go to this Know and Care Center you will find anthropologists, businessmen, union people, automobile mechanics. Part of the way you bring dignity to an occupation is to bring these good people into your classrooms. They talk to the students, college preparatory, noncollege preparatory. They begin to show that these nonprofessionals are human beings and they make a living and make a contribution and that there is a lot of skill involved.

Now, the average youngster after he talks with the machinist and he sees the academic content of a machine shop doesn't have nonsensical views. Many of us say you either work with your hands or your head. This is nonsense, and youngsters know this when they talk with these people. They see what it takes in a modern machine shop. They see the trigonometry you use, and if they are assured that these aren't dead-end programs, that they aren't terminal, and if the school district is tied in as we are with the College of San Mateo, 2 years, then you can motivate them to try the vocational program. We are not giving them a lot of baloney.

Mr. **Hawkins.** Mr. Lessinger, I see you are superintendent of the school district. Does that mean that you are superintendent over both the academic as well as the initial vocational-technical aspect of these schools?

Mr. **Lessinger.** There is just one board of trustees and one superintendent.

Mr. **Hawkins**. You are the only superintendent?

Mr. **Lessinger**. Yes. Some people say I am too much.

Mr. **Hawkins**. I think that is rather unusual to see a superintendent who is a strong advocate of a vocational-technical program. Usually this individual is someone lower down in the echelon, and I think that this also lends dignity to your program, that being superintendent of the schools you have the strong convictions in the field of vocational-technical skills.

I think that in itself lends a lot of dignity to your program.

Mr. **Lessinger**. The interesting thing is that before I got on this job I was with the State department of education in California as a specialist on the gifted, helped to write the legislation that we have in California for the gifted, so that I don't see this choosing up of sides. I think it has to go, and I like to say that I think more people in key spots are seeing the wisdom of this. I don't think it is an isolated case.

For example, the president of our college there is a strong advocate of the same type of logic.

Mr. **Hawkins**. Mr. Chairman, I have a visitor, one of the Ambassadors from one of the foreign countries, that I must spend at least 5 minutes with, and I will return. I didn't want Mr. Lessinger or any of the other witnesses to think that I wasn't interested. I shall return.

Mr. **Pucinski**. Mr. Lessinger, we may want to ask other questions and I wonder if I may ask you to move over one chair. Don't leave. Stay with us.

I am going to call upon our next witness, Mr. Maurice Daly, and we will also have a third witness and then we will have a panel of all three of the witnesses and ask questions. I think it will be a much more productive session.

We are very pleased to welcome to our committee this morning a very distinguished Congressman from Massachusetts, Congressman Burke, who has certainly been a leader in the field of education and has shown a keen and prevailing interest in the schools of his community.

We are honored to have you here with us this morning Congressman Burke, because we know what a tremendous contribution you have made to your own community in education, and I wonder if I can prevail upon you to introduce our next witness, Mr. Maurice J. Daly, the assistant superintendent of vocational programs, Quincy public schools.

Mr. Burke, we welcome you before the committee.

STATEMENT OF HON. JAMES A. BURKE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. **Burke**. Thank you, Mr. Chairman. I am Congressman James A. Burke, of the 11th Congressional District of Massachusetts. I am very happy to appear before your committee this morning just very briefly to introduce a very distinguished citizen of the city of Quincy, a young man who has made a mark for himself throughout the entire Nation for the great contribution he has made in the field of education, and he is serving as the assistant superintendent of schools in the city of Quincy, which, as the members of this committee know, is a city of Presidents.

Quincy has always been very proud of its public school system, and as a Congressman from this area I am very proud of the contributions this great school system has made down through the years, and particularly in recent years.

Of course, this committee here deserves a great deal of credit for the legislation that has been passed affecting education not only in the elementary and high schools, but in the higher fields of education, and the funds that have been made available by the Federal Government under the leadership of the members of this committee which have made it possible for many of the schools throughout the Nation to adopt programs that have been very helpful.

Leading in this field, and particularly in the vocational field, is the gentleman I am about to introduce who is a highly dedicated and devoted public servant. He is thought of very highly by all the people in the city of Quincy and by the entire Commonwealth of Massachusetts.

Mr. Daly and myself were discussing some of the problems of education just prior to this introduction and we were discussing the failure of the State government in Masachusetts, which is shocking when you realize that they rank down around 48th or 49th in contributions in aid to education to local communities.

I am very happy that the Federal Government, and particularly the Congress and the members of this committee, have recognized the many, many problems in our urban areas and I am very proud that we have men like Mr. Maurice J. Daly, who is so dedicated and who has put into practice an excellent program in the city of Quincy, and I am sure that his statements here will be very helpful to this entire committee on any future legislation that you consider.

So it is a high honor and a great privilege for me to introduce Mr. Maurice J. Daly, assistant superintendent of schools in the city of Quincy. Mr. Daly.

Mr. PUCINSKI. Thank you very much, Congressman Burke. We are very grateful to you for being with us here to introduce this witness. We are hopeful that the testimony of Mr. Daly, and Dr. Lessinger, and Miss Pressley, who is going to be with us a little later this morning, is going to produce the kind of information that we need to construct a meaningful vocational education act.

I am disturbed over the fact that bond issues are being defeated all over this country, and this is a growing phenomenon. I don't think that this reflects a lack of interest on the part of citizens in education. I think instead it reflects a somewhat growing disappointment on the part of citizens at the fact that, while the cost of education keeps going up, the net product is not necessarily improving in its quality, and I look forward with great interest to the day when we can strengthen the vocational education programs in this country because I think this is the kind of program that the average citizen is looking for.

We have gone through the noble experiment for the last two decades and it seems that we are now coming back to some of the realities that Dr. Lessinger described. It is becoming more and more definite that there is no conflict between a youngster developing a marketable skill which he can use in life or not use in life and still prepare himself for higher education, and I agree with Dr. Lessinger that there has been a tendency too long to isolate vocational education.

I think that we now have to integrate vocational education into the educational process so I am looking with great interest to your testimony and to your describing your Project Able which you people have developed in your curriculum development research project.

We welcome you before the committee. We have your full statement here and it will go in the record at this point as you have prepared it. You are free to proceed in any manner you wish. Perhaps you would prefer to summarize it so that our members would have an opportunity to spend more time on questioning, but your formal statement will go in the record at this point.

STATEMENT OF MAURICE J. DALY, ASSISTANT SUPERINTENDENT, VOCATIONAL PROGRAMS, QUINCY PUBLIC SCHOOLS, QUINCY, MASS.

Mr. DALY. Thank you, Mr. Chairman.

(The statement referred to follows:)

STATEMENT OF MAURICE J. DALY, ASSISTANT SUPERINTENDENT OF QUINCY, MASS., PUBLIC SCHOOLS

PROJECT ABLE

Introduction: If today one were asked to characterize, in one word, education in the United States, that word would likely be "change". Never has education been of such national concern, with tremendous pressures at all levels to improve the product of our educational processes. Yet while we read on the one hand of the various federal acts which provide assistance for education, there appears to be a continuing problem with our youth leaving high school prior to graduation. Perhaps of even greater concern, large numbers of our high school graduates enter the labor market with little or no employable skill for today's industrial technology. By some estimates as much as 75% of our secondary school student population will not go on to college; an alarming portion of these non-college bound youngsters will follow a general curriculum in high school which fits them for no specific employment without further formal training.

Paradoxically, industry at this time has large numbers of unfilled jobs at the middle skill levels, and automation, while eliminating some jobs, is also creating jobs at low and upper middle levels. It does not seem too much to ask of education to prepare more of our youth for gainful application of their high school studies. As early as 1963, administration in the school system of Quincy, Massachusetts, took a positive step toward changing the output of its secondary schools. Based on a report from the Massachusetts Department of Education, Division of Vocational Eduaction, that a new vocational-technical school should be established, the School Committee approved plans for the new facility and construction is underway. Almost concurrently, planning for a curriculum was initiated which departs in a number of aspects from the traditional ideas contained in the usual "trade" school. The program and architecture of the new vocational-technical school in Quincy will be built around the concepts of job families.

Purpose: Preparation of a program of study for the new school is a joint research project of the Quincy Public Schools and the American Institutes for Research, Pittsburgh, Pennsylvania. It is sponsored by the U.S. Office of Education and is scheduled over a five-year period from its beginning in April 1965. The total budget for five years will approach $950,000 of which approximately one-third represents locally contributed monies. However, actual funding will occur on an annual basis in terms of the extent of effort programed for the particular fiscal year. The staff includes three full-time research people from the American Institutes for Research and eleven faculty members from the Quincy Public Schools who combine half-time on the project and half-time in teaching. In addition, teachers throughout the system provide special assistance from time to time. A panel of seven advisors, each of whom is a nationally eminent scholar or educator, meets several times each year to provide technical review and guidance to the effort, and a local advisory committee composed of Quincy businessmen and civic leaders meets monthly to consider requirements of the physical plant and plan for graduate placements.

The official title of the program is "Development and Evaluation of an Experimental Curriculum for the New Quincy (Mass.) Vocational-Technical School." However, the code name "Project ABLE" is being used as descriptive of the basic purpose of the study. That purpose is to provide every student not in the college preparatory program with an opportunity to achieve competence in each of three areas:

1. skills and knowledges in a chosen field of work;
2. the individual's role as a citizen;
3. independent pursuit of self-fulfillment and new learning.

The curriculum for the new school is intended to extend from the 9th to the 14th grade, to include post-12th grade instruction in areas like elecrtonics, computer data processing, and the machine tools technology. The specific job families around which both the new school building and the curriculum are being organized are the following:

1. Business Education—Secretarial, Clerical, Bookkeeping, Sales;
2. Computer Data Processing—Equipment Operators, Programmers;
3. Electro-Electronics—Electrical Installation, Electronics Repair;
4. Foods Preparation—Food Service, Food Processing;
5. General Piping—Plumbing, Pipefitting, Refrigeration;
6. General Woodworking—Carpentry, Patternmaking, Boatbuilding;
7. Graphic Arts—Printing, Commercial Art, Drafting;
8. Health Occupations—Medical Assistants, Personal Care;
9. Home Economics—Homemaking, Home Services;
10. Metals and Machines—Sheet Metal, Machinists, Foundry;
11. Power Mechanics—Auto Body, Auto Mechanic.

Approach: The principal goal of the project is to demonstrate increased effectiveness of instruction whose content is based upon explicit derivation from analysis of desire behavior after graduation. Rather than taking a total body of knowledge and drawing content from it, curriculum will be defined by what technology and industry need for job success. Subordinate objectives embodied in this plan are the following:

1. *Development of educational objectives.*—The intent here is to identify the behaviors which are desired of the student when he has completed a particular course of instruction. Education has no meaning in the abstract-objectives need to be stated in specific operational terms. While emphasizing the vocational area of educational goals, they will include the development of individual attitudes toward work, habits of work, and standards of excellence.

2. *Derivation of curriculum requirements.*—Curriculum needs will be described in terms of topics within each "subject" and placed in an instructional sequence which takes prerequisite knowledges systematically into account. Each learning sequence will be in the curriculum because it must be there if the student is to be competent and the justification for its presence can be demonstrated on the basis of relevance to a vocationally oriented educational goal. Project ABLE, by analyzing the requirements of many jobs within each of the eleven broad vocational areas for common and related skills, will provide education in the skills and knowledges which are common to a variety of occupations. This should minimize the amount of "new" training that might result from job change or as opportunities open up in related areas and provide flexibility needed to accommodate to changes in demands of the technology.

3. *Description of needs for prerequisite learning.*—The elaboration of a new curriculum for the vocational-technical school will also make possible the specification of prerequisite knowledges to be acquired in junior high years of schooling, including the kinds of student preparation which might be gained in industrial arts and other basic areas of instruction. The aim will be to make possible the development of broad exploratory programs in the junior high grades by the Quincy schools, to prepare students for productive educational and vocational careers.

4. *Effective changes in student viewpoints.*—The new school, with its newly designed educational offerings, should become attractive to students of a variety of backgrounds and abilities. A most difficult task for facing any student and his family is that of choosing realistic life goals and the educational path to that goal. The pressures of our society have been directed toward college attendance

while the trade school course has been relegated to second-class status. But we cannot afford to allow even a small fraction of the 70% who will not go to college for one reason or another, to leave high school from a "general" course with no particular skill or knowledge to market. The project includes preparation of an organized program for assessing the student's abilities and interests, and for helping him with his family evaluate these over a wide range of occupations. This will involve the inservice training of junior high school guidance counselors and the provision of materials and information for junior high students.

5. *Individualizing instruction.*—It has been demonstrated repeatedly that individuals differ with respect to a great variety of abilities. The traditional classroom has not made sufficient provision for these individual differences, but with increasing frequency, especially at the elementary level schools are changing to ungraded study programs. Project ABLE incorporates the concepts of individualized instruction by providing a framework which will allow for maximum flexibility of student progression through a course. Learning will be a process guided by the teacher rather than forcing facts into students. A student's achievement will be the standard of his learning progress and at the same time a primary source of his motivation. The student is given a set of objectives which tell him all the things he is expected to be able to do after completing an assignment. Individual tutoring, small group discussions among students at a similar stage of progress, demonstrations, and possibly seminars are decided upon by the teacher and scheduled as needed. The key feature, however, is that students do the learning largely on their own and student-teacher ineractions do not generate into lecture classes. When the student completes an assignment and feels he is ready to go on, he informs the teacher who administers the appropriate achievement test, scores the test immediately, and if the student has succeeded, makes another assignment.

6. *Student evaluation.*—Appropriately derived topic objectives will lead directly to measures of student performance. It is desired here that all "units" of instruction have performance measures which are available to the student, to instructors, and to guidance counselors. These proficiency tests are an essential and integral part of the individualized instruction and they will contribute to making the student evaluation file a clear history of learning achievement. Emphasis in this testing is on attainment of goals, rather than upon differentiation of students into "good" or "bad," and to provide directions for future effort on the part of the student.

7. *Program evaluation.*—A comprehensive program of evaluation will include objective measures of immediate outcomes, as well as the foundations of techniques for the later collection of follow-up data on educational outcomes after graduation. Student evaluations will yield many of the basic data for program evaluation; this will require systematic recording and storing of indicators of student experience and performance. A second feature is establishment of techniques for following up the student at periodic intervals, so that his location is known; this will make possible the obtaining of information on employment, job success, career progression at intervals after graduation. Systematic information of this sort will constitute the basis for program evaluation in terms of its long range effects.

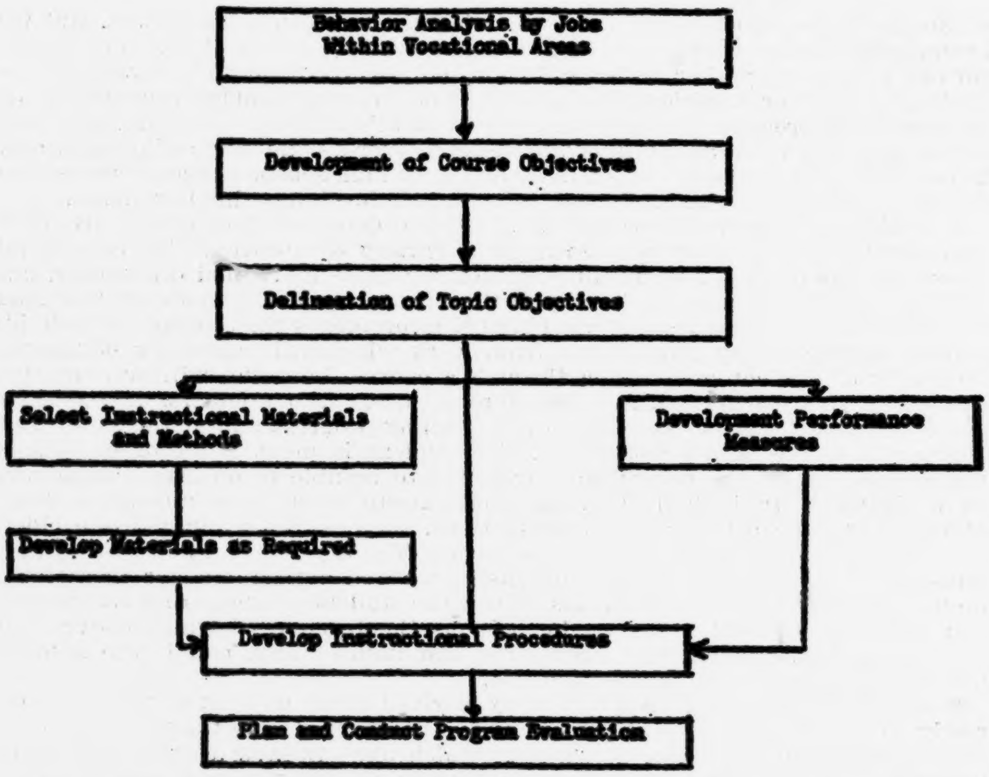

Behavior Analysis by Jobs
Within Vocational Areas
Development of Course Objectives
Delineation of Topic Objectives
Select Instructional Materials
and Methods
Development Performance
Measures
Develop Materials as Required
Develop Instructional Procedures
Plan and Conduct Program Evaluation

FIGURE 1.—Overview of Steps in Curriculum Development and Evaluation

Some Expected Outcomes: The purpose, approach, and developments of Project ABLE with reference to the new vocational-technical school in Quincy have been established to achieve certain specific ends. Although the immediate goal is to be a curriculum, there are features being incorporated that deserve separate identification.

The students of immediate concern in the project are those who are not college-bound. Provision must be made however, for those who may change their educational path. The curriculum is intended to provide the courses needed to meet in part the college entrance requirements; at the same time the curriculum will be oriented toward the general vocational education that all students should have to meet the demands of everyday living in an increasingly complex technical society. At the junior high school level there will be group instruction on the world of work and its occupations. This will be integrated with a guidance program working to provide each student with materials he needs to make a sequence of decisions narrowing from a choice of educational path most compatible with his abilities and interests thru selection of a vocational area to a specific group of jobs within the area. At the high school level, a sequence in

Social Studies will deal with the economics and sociology of industry and the citizen in a modern society in relation to family and political institutions. For Mathematics the courses will be aimed at competence and speed in basic operations, progressing to measurement, graphing, and descriptive geometry, and culminating in algebraic equations and trigonometry. English will have as its goals providing instruction in reading, oral and written communication, beginning at basic levels of competence and progressing to the comprehension of technical reports; and providing appreciation of human values in literature, beginning at points of interest appropriate to the least "literate" student. A science course will emphasize the functioning of human organ systems. Elective courses will be oriented toward acquaintance with activities of a self-fulfillment leisure time nature.

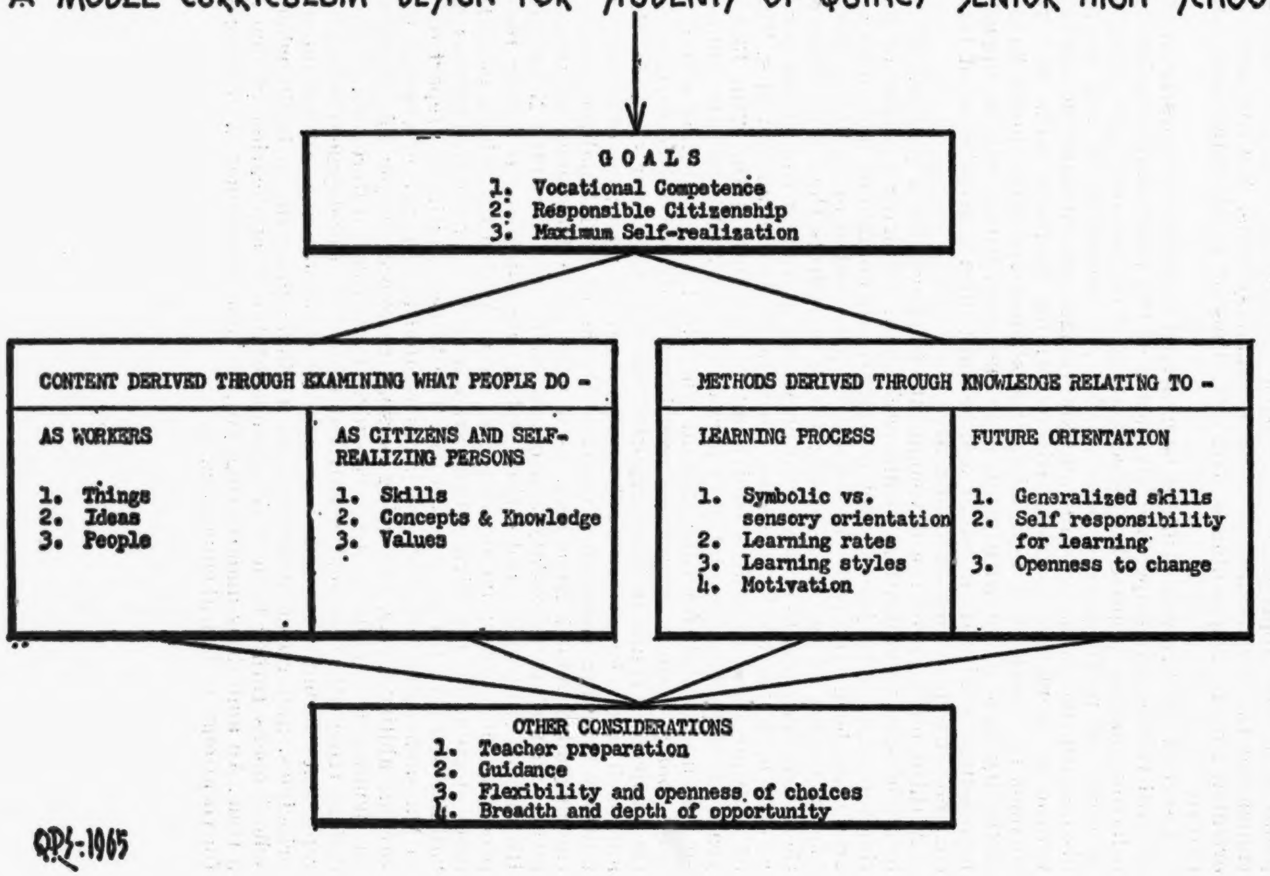
A second feature which might be expected to accrue follows from the idea of general vocational competence. By means of the vocational area-job description-behavior analysis approach to specification of course and topic objectives stated in terms of performances required for job execution, it will be possible to distinguish the learnable skills and knowledges generalizable across several jobs within an occupational group. Given training in those skills and knowledges common to a variety of occupations, the student-graduate should have a greater flexibility in shifting with changes in industry. There will be opportunity for increasing specialization, but it will be built upon a broad base of more general competence within each vocational area.

A third outcome of the development effort will be a planned set of graded levels of specific education within each area, requiring a range of preparation times designated by jobs (or job clusters). The domain of jobs in an occuational group has been structured to reflect the progression of skills inherent in those jobs. Selection of jobs to represent the area reflects the levels involved so that there are clear points of demarcation where a student can attain certified competence up to the level commensurate with his individual abilities. This concept of multiple exits at points equivalent to the 10th, 11th, 12th, 13th and 14th years of education is an integral part of Project ABLE and the philosophy of a specific usable skill for each student when he leaves full-time school.

Summary: Some readers have probably already recognized certain elements of the project as familiar ideas reported on elsewhere. For example, the job-task approach to the behavioral-performance analysis was used effectively in certain military training research programs. Forms of individualized instruction and the ungraded school have been used with some frequency at the elementary level, and also in secondary schools in Melbourne, Florida; Norridge, Illinois; Richmond, California; and others. Specifying objectives is a long recommended procedure in curriculum development. New York City school officials recently made a point on the high school graduates with general diplomas as persons "all dressed up with no place to go". The Willis-Harrington report on education in Massachusetts included comments related to a range of content offerings at various ability levels, preparing persons to expect major job changes, and for curriculum materials which recognize individual differences. Project ABLE differs from other present vocational education development efforts in that it represents a multi-faceted approach by incorporating all of these concepts, principles, and recommendations in a single program to begin when the new school opens rather than making an operational application of one or two at a time. An ambitious undertaking, yes, but one which may well become a model for vocational-technical education.

VOCATIONAL EDUCATION

A MODEL CURRICULUM DESIGN FOR STUDENTS OF QUINCY SENIOR HIGH SCHOOLS



GOALS
1. Vocational Competence
2. Responsible Citizenship
3. Maximum Self-realization

CONTENT DERIVED THROUGH EXAMINING WHAT PEOPLE DO -

AS WORKERS
1. Things
2. Ideas
3. People

AS CITIZENS AND SELF-REALIZING PERSONS
1. Skills
2. Concepts & Knowledge
3. Values

METHODS DERIVED THROUGH KNOWLEDGE RELATING TO -

LEARNING PROCESS
1. Symbolic vs. sensory orientation
2. Learning rates
3. Learning styles
4. Motivation

FUTURE ORIENTATION
1. Generalized skills
2. Self responsibility for learning
3. Openness to change

OTHER CONSIDERATIONS
1. Teacher preparation
2. Guidance
3. Flexibility and openness of choices
4. Breadth and depth of opportunity

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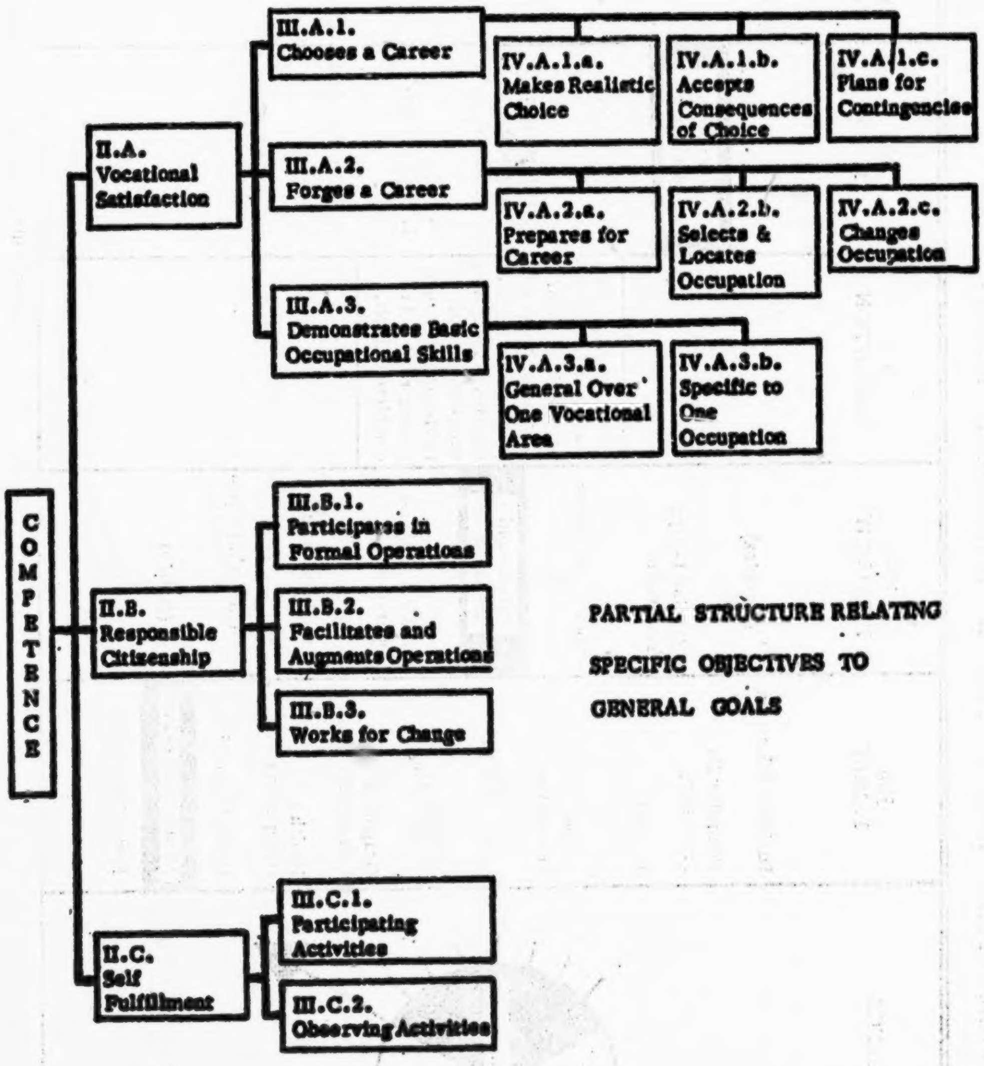
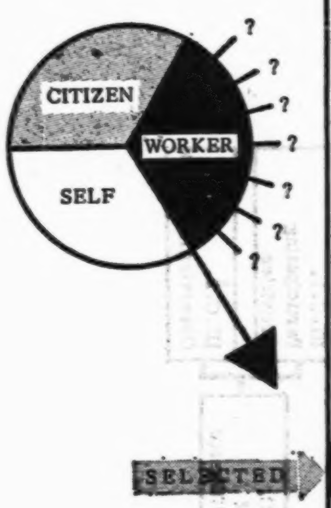

COMPETENCE
II.A. Vocational Satisfaction
III.A.1. Chooses a Career
IV.A.1.a. Makes Realistic Choice
IV.A.1.b. Accepts Consequences of Choice
IV.A.1.c. Plans for Contingencies
III.A.2. Forges a Career
IV.A.2.a. Prepares for Career
IV.A.2.b. Selects & Locates Occupation
IV.A.2.c. Changes Occupation
III.A.3. Demonstrates Basic Occupational Skills
IV.A.3.a. General Over One Vocational Area
IV.A.3.b. Specific to One Occupation
II.B. Responsible Citizenship
III.B.1. Participates in Formal Operations
III.B.2. Facilitates and Augments Operations
III.B.3. Works for Change
II.C. Self Fulfillment
III.C.1. Participating Activities
III.C.2. Observing Activities

PARTIAL STRUCTURE RELATING SPECIFIC OBJECTIVES TO GENERAL GOALS

PARTIAL CONCEPTUAL DESIGN FOR A BEHAVIORAL ANALYSIS

COMPETENCE



JOB FAMILY

- Business Education
- Computer Data Processing
- Electro-Electronics
- Foods Preparation
- General Piping
- General Woodworking
- Graphic & Commercial Arts
- Health Occupations
- Home Economics
- **Metals & Machines**
- Power Mechanics

JOB HIERARCHY

- (Complex)
- Machine Design Technician
- Tool & Die Maker
- **All-Around Machinist**
- General Machine Operator
- Lathe Operator
- Machinist's Helper
- (Simple)

JOB DESCRIPTION

Sets up and operates any machine tool in any machine shop. Carries through all jobs to completion. Interprets blueprints and performs all mathematical calculations required to complete the job.

JOB TASKS

1. **Interprets blueprints**
2. Selects stock
3. Determines machine sequence
4. Lays out work
5. Sets up machine
6. Makes part

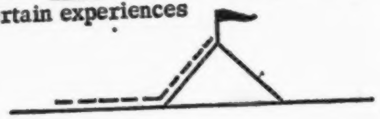
PREREQUISITE SKILLS & CONCEPTS

- Blueprint reading
- Mechanical Drawing
- Linear measurement
- Competence in elementary geometry and trigonometry

Quincy Public Schools - R.E.Pruitt - January 1968

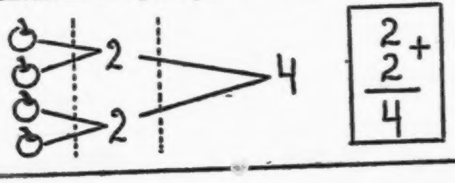
LEARNING UNIT CONTENTS

1. OBJECTIVE
Statement of goal...what the student should know or be able to do after having had certain experiences



2. OVERVIEW
Statement of why...provides meaningful setting, context or perspective of goal

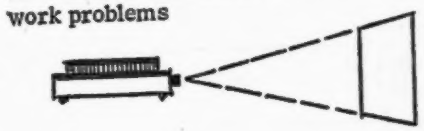
3. LEARNING EXPERIENCES
Statement of how to go to new capability... methods and procedures for gaining the objective



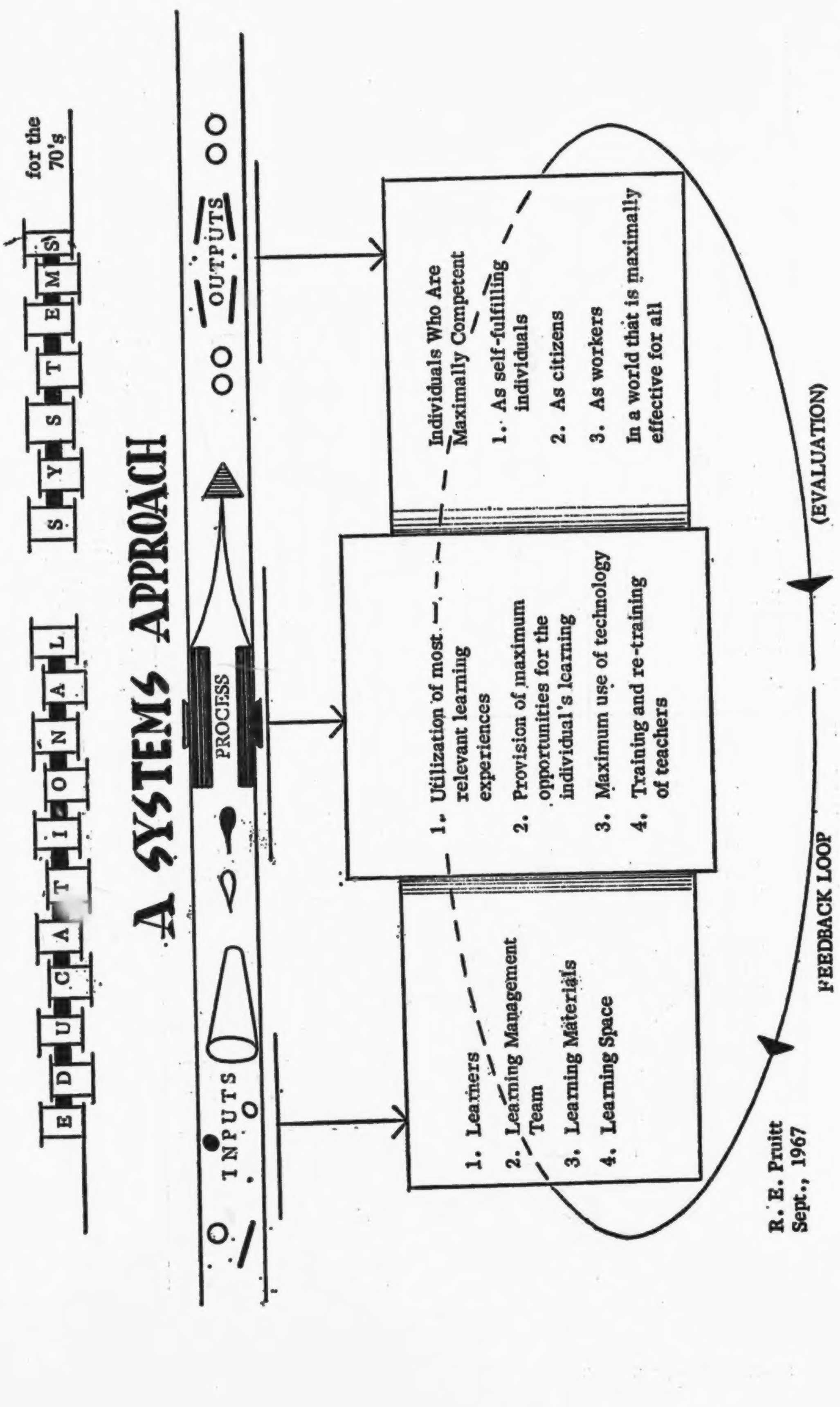
4. SUMMARY
A backward look at where student has been... indicates relationships and relevances between experience and objective

5. REFERENCES
Defined supporting aids which provide the route to competency...the essential tools

6. LEARNING AIDS
Film strips, cutaways, simulators, equipment, and other communicative devices....or set of work problems



7. STUDENT EVALUATION
The ways and means of knowing if a capability has been reached...the only part of unit which student does not see in advance


EDUCATIONAL SYSTEMS for the 70's
A SYSTEMS APPROACH
INPUTS
PROCESS
OUTPUTS
1. Learners
2. Learning Management Team
3. Learning Materials
4. Learning Space
1. Utilization of most relevant learning experiences
2. Provision of maximum opportunities for the individual's learning
3. Maximum use of technology
4. Training and re-training of teachers
Individuals Who Are Maximally Competent
1. As self-fulfilling individuals
2. As citizens
3. As workers
In a world that is maximally effective for all
FEEDBACK LOOP
(EVALUATION)
R. E. Pruitt
Sept., 1967

Mr. **Pucinski.** Perhaps before I proceed, Mr. Scheuer, do you want to add anything?

Mr. **Scheuer.** No. I just want to thank the witnesses and Congressman Burke who seems to have left us for their very interesting testimony. It has been most useful to us.

Mr. **Pucinski.** Congressman Meeds?

Mr. **Meeds.** No, sir.

Mr. **Pucinski.** Won't you proceed, Mr. Daly?

Mr. **Daly.** Mr. Chairman and members of the committee, first I wish to tell you that I certainly appreciate the opportunity of appearing before you regarding vocational education and its place in the mainstream of education.

I don't feel qualified to make recommendations on specific legislative changes because I am sure that there are many factors that have to be considered and a great deal of research.

My real reason for coming here is to talk about what is going on in the city of Quincy by way of vocational education, innovation and curriculum development, research, and implementation.

First I might say that Quincy is a community of about 90,000 citizens. We have about 16,300 students in our public schools. Of this number approximately 3,500 are in grades 10, 11, and 12. The school plant in Quincy consists of 22 elementary schools, five junior high schools, one vocational-technical school, and two general high schools. In addition to this the city of Quincy operates a junior college with an enrollment of approximately 1,400 students.

This is a city-operated junior college and it is not connected with the community college system in the State which is in the process of being developed at this time.

Last September we opened the new vocational technical facility. It is intended that there will be a 3-year cycle in filling this building to its capacity of 1,100 students. This is a little less than one-third of our total high school population in grades 10, 11, and 12.

We also have grades 13 and 14 or post-high-school programs in this facility. It is planned in the city of Quincy that approximately one-third of our high school pupils should be in occupational training and education, and that there should be approximately one-third in home economics and business occupational pursuits, and approximately one-third in the college preparatory pursuits.

We do not distinguish between the types of education that these people get. Actually the level of work that all youngsters get is geared to their capacity to learn. They can be college preparatory even if they are in home economics, or business type programs, or trade and vocational. They can still get the preparation that they need to go on to the college of their choice.

However, we know that with every decision that they make as far as their objectives are concerned there probably will be some penalty attached.

I am sure if I wanted to study medicine beginning tomorrow that I would have a long road ahead of me because I have not prepared myself in that direction. So we must teach youngsters that there are penalties attached to their vocational decisions and it may be possible that they have to step back in some areas, but we make it possible for them to get the kind of education that is geared to their level of learning.

The new vocational-technical school that has been built in Quincy—and really we think of it as a vocational-technical facility—is connected to a regular comprehensive high school by a bridge. The bridge crosses a street that intervenes between the two buildings. This bridge is not only a physical facility for getting students back and forth, but it is also symbolic. It is the bridge between vocational and general education. It is the bridge that they cross for their academic subjects, for the use of the libraries and laboratories on the one hand, and there is an interchange of students across this bridge all day long.

In addition to that we have another bridge which really is a bussing activity from our other high school where some youngsters come for parts of their program to the vocational-technical facility. The building that we have put up contains approximately 200,000 square feet of floor space. It is of a unique design in the sense that the building itself is four floors and basically it is four rooms. This space then can be divided by movable partitions or walls that can be easily moved so that we can enlarge or contract any area to roll with the punches as things change in the world of work.

In this building we have a library that will seat approximately one-third of the student body. This library is a curriculum research and development center plus having all of the materials available for any type of work whether this is vocational or more academic types of subjects, and we also have connected with this a skills development center.

Ordinarily in education we talk about remedial kinds of work that go on such as remedial reading. In Quincy we call it skill development, and actually we do not segregate students of different learning abilities.

We have all the facilities, for example, in this one area where one youngster can be learning to read at the fourth grade level while next to him somebody is doing some basic research in atomic energy or whatever the facilities are there.

It is independent study, and research under the guidance of well qualified instructors. I started to give you some of the basic background and the setting for the project which we are undertaking.

Project Able is a curriculum research project which was developed in Quincy and it is authorized under section 4(c) of the Vocational Act of 1963. From this act we will receive approximately $625,000 over a 5-year period and at the same time there will be a local contribution of, as I estimate, well over $400,000 to develop a new kind of vocational-technical curriculum.

The aim of this curriculum in general is to be sure that no youngster leaves our secondary schools without a salable skill. I say leaves. This could be previous to graduation or upon graduation or even after graduation.

But we have developed curriculum in 11 families of occupations within this building and in these 11 families we have broken them down to specific occupations that are related to those families, for example, the metalworking family or the health occupations family, and by breaking these down into the kinds of occupations that are related within this family we find that there are occupations of low level that can have short-term training.

Others need longer terms of training. Then by going all the way you will complete the training to reach the top of the specialty, but we have broken it down so that occupational training can be at any level and if a youngster came to us and stayed only 6 months he would have some kind of a salable skill within that family of occupations.

Now, of course we recognize the fact that he perhaps could not go to work at the tender age of 14 or 15 or something like that, but we do hope that he will have something that is salable at the time that he is able to go to work. We are not bothered seriously with a dropout problem in the city of Quincy.

We have an extremely low dropout rate. Perhaps one of the reasons for this is that we do attempt to make programs relevant and worthwhile and geared to the kind of a world that youngsters are going to have to live in. That is the major consideration of Project Able: to see that youngsters have a salable skill even if they wanted to leave school early.

It is also dedicated to the fact that education is a lifelong process and that we intend to, in our part-time and evening programs, continue to upgrade people within their chosen occupation or to make it possible for retraining so that they can keep abreast of the changes that are going on in the world of work.

Naturally, and I guess above all, in all of this what we are attempting to do is to make well-rounded, self-supporting, hard-working citizens who are not only craftsmen or workers or members of the working force, but who also have the opportunities for further education. And also we have geared into this program a section on self-fulfillment, appreciation of the finer things of life, so we really have tried to make a well-rounded curriculum.

We have been working on our research project with the assistance of the American Institutes for Research and their behavioral analysts and researchers and curriculum development specialists. Primarily in Project Able, however, the curriculum development is an internal process that is going on, using our own staff of instructors who spend part of their time on curriculum development.

We are now in our first tryout year and, as I mentioned, the new facility was opened in September and we began the first tryout year of curriculum this year.

Therefore, we are approximately one-half way through the first year of trial. There will be revision and next year we hope that we will be able to add some more to it and to make some changes that will make it more relevant as we move along.

I think that one of the things that I would like to remind this committee of is that not only do we need money to make innovation and change possible, but there are some aspects of change that become very, very difficult, especially in communities, in our larger cities, for example, where they already have something.

They already have, for example, vocational education, they already have schools, and conversion to some of the newer things is even more expensive and painful than establishing new schools in districts where there has been nothing before. I think this is something that should be given special consideration, especially in some of the large cities where we have social problems.

It is difficult for these cities to change. We find this difficulty in the city of Quincy to some extent. In the city of Quincy, however, we enjoy a community where we believe in education. We have had tremendous public backing. We have had an excellent relationship in the school committee and throughout the city so that we have not been held up in doing the things that we want to do, but we are not a wealthy community. Money is really tight and essential and we are trying to stretch every dollar.

As a matter of fact, I might mention in Project Able, where we are using $625,000 over a period of 5 years. We deeply appreciate this assistance.

However, when we look at the size of the task that we took on and you find out what has happened with other curriculum development projects, for example, like $5 million to develop a ninth-grade physics program, so to speak, it is not enough but we are going to make it go. We are going to do the job and I am sure that we will do our best to make this project work.

It is essential, therefore, that money continue to be distributed and distributed to the bottom to some extent where it reaches students rather than to the top where there might be some economic fallout that eventually reaches youngsters. Communities need tremendous assistance.

I have given you a prepared statement on Project Able and, therefore, I have tried to just talk around some of the things that we see and perhaps relate to you some of the problems that are inherent in curriculum development.

I believe, therefore, that the description that you see of Project Able which you have in front of you is important for everyone to look at. I think also that I might mention that the format that has been used in the development of Project Able is closely related to the overall and much greater project, ES '70, and we believe that we have provided at least a model or a partial model through the development of behavioral objectives for occupational pursuits and curriculum development, and this kind of format or matrix is the skeletal bones, you might say, that apparently is going to be used in project ES '70.

Project ES '70 is a noble undertaking because the whole of education needs a frontal approach. We cannot do the job in bits and pieces. So when we try to improve vocational education we must try to improve and integrate general education. It is all one big job and it needs a total frontal approach, and therefore I am very pleased to see that ES '70 is going to be a going concern in a very short time.

I would be glad to answer any questions at this point if I can.

Mr. **Meeds** (presiding). Thank you for your testimony on Project Able, Mr. Daly. I am sorry I didn't get a chance to read your entire testimony. I was trying to listen to you and read part of it, too, but perhaps you can clarify several things.

Is this a program in which you presently have students involved?

Mr. **Daly**. Students have become involved in this beginning last September. We are not totally operational within this plan. We have been working the previous year on the development and this is a test or trial.

Mr. **Meeds**. How many students do you have, presently?

Mr. Daly. In this new facility there are 500 students. This is the first year and it will be a 3-year cycle to fill the school. Three hundred of these are involved in Project Able materials now.

Mr. Meeds. How was the selection of these students made?

Mr. Daly. This is something that I should mention. Along with the curriculum development we have also developed in Project Able perhaps some of the best guidance materials that I have seen anywhere. This is a program of guidance with the studying of occupational information way back in grade 7. There is a comparison of occupational requirements versus behavioral analysis of people who work in these occupations, and the youngsters at that level begin studying a wide variety of occupations, comparing their own capabilities, getting down to some pretty fine points such as, is color blindness a factor in choosing an occupation?

Mr. Meeds. Do you have any testing program that is done at the seventh-year level?

Mr. Daly. Yes, along with this there is testing and research on their part. The parents are involved, and they refine this activity over a period of 3 years, seventh, eighth, and ninth.

Mr. Meeds. This research testing and program is carried out by counselors at the seventh grade.

Mr. Daly. Yes, counselors, teachers, the business people in the community that come in. The doctors, lawyers, machinists, and everybody are helping us with this and we do call them in through a very large advisory council which works with this program and works with us.

Mr. Meeds. And then the individual student makes the choice or determination in coordination with the recommendations of a counselor or board?

Mr. Daly. Yes, it is his final choice. However, we try to make these decisions as painless as possible. For example, in his junior high years he will be getting not only the guidance material, but experience through industrial arts which covers a wide variety of industrial processes, materials, and so forth.

When he makes the decision that he is going into a vocational occupation he does not choose a specific occupation such as machinist, for example. If he likes to work with metal better than he likes to work with wood, he is placed in what we call the metals and machine division and he gets experience here in all of the things related to metal, such as foundry, metal fabrication, welding, machine shop, some metallurgy, and so forth, and he refines this after the broad base of metalworking information, theory, and mathematics. He refines this and comes up to setting his goal as machinist, or tool and die maker, or metallurgical technician, or whatever it might be, at whatever level.

Mr. Meeds. I understand this is primarliy a curriculum development program.

Mr. Daly. Yes.

Mr. Meeds. How are you meeting the question, for instance, of, to take an example, a 10th-grade boy or a ninth-grade boy when he starts in your program, being interested in draftsmanship but having done very poorly in mathematics in seventh and eighth grades? Have you developed an academic curriculum and tied it into the vocational-technical approach, and if so, would you tell us about it?

Mr. DALY. Yes. The field of, well, drafting of course is one. First, we start them out in a metal field. Everybody in the metals field would start in with a basic mechanical drawings approach and then after that they would begin to specialize in more the machine design kind of things.

The mathematics is developed along this line too. We in Project Able are saying mathematics for what? In other words, we have developed math programs that are for machinists.

Now, they are not, just as this gentleman has said, different mathematics programs. They are acceptable for college preparatory types of work.

However, we deal in the one case with nuts and bolts rather than apples and oranges, and they are geared to the specific goals of the job. However, it is basically the same mathematics and the English and communication goals are the same.

Now, as to the level of the student in this program, we take him as far as he can go and this in some cases may not be too far in the field of mathematics or some other subject, science, for example, but in the analysis of the occupational activities that we have developed in connection with any one of these 11 families which are described here there is a place for this youngster and we have described the occupations, the limitations, and everything else through our guidance program.

Mr. MEEDS. I realize it may be a little early to tell yet but I wonder if you have had any results from taking students, for instance—and I like your example of apples and oranges and nuts and bolts—in the seventh and eighth grade that didn't get mathematics in terms of apples and oranges and yet when you put him into the program in which he felt more familiar and started talking mathematics in nuts and bolts, have you noticed a tendency on the part of these young people to have an increased interest and hence to relate better and score better in their subjects?

Mr. DALY. Yes, and this again is a motivational thing. I have seen over the years, and not just limited to what we are doing now, but over the years in vocational education, we find that they can learn if there is a reason for learning, and the youngsters must understand that this is worthwhile, it is relevant, "I need it," and they tend to do it 90 percent of the time.

I am not convinced that our youngsters today are stupid. I think that they are asking the question "Education for what?" For what? "Show me why I should study Latin. Show me why I need mathematics."

And if they are motivated and they understand for what it tells them, and vocational education does this I believe—it tests them and they work with real relevant things and therefore it is meaningful to them and they want it.

Mr. MEEDS. I was interested in your discussion with regard to the bridge as being both phyical and symbolic. I am not being adverse here, but I am a little troubled with this symbolic concept.

Is not one of the problems that we have in vocational-technical education a desire on the part of parents, instructors, and many others, all of us probably, to orient our children in an academic arena rather than a vocational-technical arena, and does not this symbolic gesture of a bridge tend to widen that separation of areas?

Mr. **Daly.** I would say no in this sense: As I mentioned before, although we call this Quincy Vocational-Technical School, it really is the vocational-technical facility which is part of the comprehensive system.

In other words, this is the laboratory center for the comprehensive high school and we do have all kinds of equipment for all of the occupations we cover. The academic subjects that the youngsters, in many cases, take in integrated classes. They are not separated from the regular student body in this. They are not over in that corner and you over here.

It is just that this is the program that they are pursuing but they are all members of the same class, so to speak, and, as I say, we have built facilities, for example, like the library for this total compound in the vocational-technical unit or facility. This is good.

Mr. **Meeds.** Do I understand that your vocational-technical facility is across the bridge, so to speak?

Mr. **Daly.** Yes.

Mr. **Meeds.** From the rest of the school?

Mr. **Daly.** Well, yes, it is. In other words, there are classes——

Mr. **Meeds.** The compresenhive high school?

Mr. **Daly.** Yes, there are classes in both and there is an interchange of students constantly.

Mr. **Meeds.** Do the pupils who are studying academic subjects come over and take the part-time vocational-technical subjects?

Mr. **Daly.** Yes, this is possible, just as it is for the vocational student who is studying one of the occupations to go over and be mixed in a high-level physics class or something with other high school students.

Mr. **Meeds.** I have drawn a conclusion here and I just want to check with you. My conclusion is that you felt it was more valuable to give togetherness as a group of technical-vocational students and provide rapport that would then form among that group rather than to try to assimilate them into a student body which you would use as a component of a comprehensive school; is that correct?

Mr. **Daly.** I prefaced my remarks by saying I was hoping that I could describe what we are doing here in the city of Quincy and show something about vocational education being part of the mainstream of education. It is not something different and aside. It can be college preparatory, vocational types of education. It is not something to be put off in the corner or the basement where it always used to be.

Mr. **Meeds.** If you will forgive me, I am afraid I am getting the conclusion that this is what you are doing by the symbolic bridge.

Mr. **Daly.** Yes.

Mr. **Meeds.** And the setting apart of the facility. I hope you will keep close tabs on the reaction you get from the peers of these people.

Mr. **Daly.** Yes.

Mr. **Meeds.** In terms of what they think of them and what they think of them as a group.

Mr. **Daly.** Yes. Yes. Our reactions so far have been excellent, and this has been happening since last September and it seems to be building all the time, so we are hopeful that it will continue.

Mr. MEEDS. And I have one last question. You stated that one of the purposes was to enable students to be prepared to enter the world of work with a marketable skill. What type, if you will just run through it briefly, of system have you worked out, liaison, coordination, or whatever, with the local employment security people, the local business people, the local industrial people, with regard to job placement and what is down the road?

Mr. DALY. We, as in most successful vocational education activities, depend on quite a large advisory committee. We have many, many subcommittees to this large advisory committee, and they represent all of the occupations which we teach within the school. They are the businessmen, the manufacturers, and people of this kind, the merchants, and so forth.

In addition to that we also have public members who represent, for example, the employment service. They are on our committee. The local employment manager is chairman of a subcommittee on unemployment, distribution of manpower, manpower needs, this sort of thing. We find that it is essential to maintain this kind of two-way communication.

We also call on them to assist us in the guidance program, for example, to talk to individuals or groups of youngsters who might be interested in a particular field. We work very closely with them.

Mr. MEEDS. OK. Fine. Thank you very much.

Mr. PUCINSKI (presiding). Dr. Lessinger, do you have to leave to catch a plane?

Dr. LESSINGER. I don't have to leave until about 11:30.

Mr. PUCINSKI. Before we go on to our final witness I will ask Mr. Scheuer do you have any questions of Dr. Lessinger?

Mr. SCHEUER. No. I merely wish to thank him for his testimony.

Mr. PUCINSKI. Mr. Carey.

Mr. CAREY. Not at this time.

Mr. PUCINSKI. Mr. Dellenback?

Mr. DELLENBACK. No, Mr. Chairman. I will make a point to read his testimony. I apologize for having been in another committee meeting. I have no questions.

Mr. PUCINSKI. Mr. Quie.

Mr. QUIE. I shall not ask any questions. I would like to say, however, that I am glad your testimony has been brought to us. With reference to the subject that you have discussed this morning, "A Marriage Proposal for the 1970's," I believe that there must be a kind of marriage between vocational education and the academic courses. We will be much farther ahead if we put this together in understanding the legislation here, too.

So I merely want to compliment you on your presentation.

Mr. PUCINSKI. Dr. Lessinger was very helpful in showing us how in his school system they have broken through the old myth that there has to be a separate system for vocational education and a separate system for college preparatory. There is no question that this is most probably the way of the future and I think you are just substantially ahead of the future and we are grateful to you for your testimony, Doctor.

I do hope you can make your plane.

Is there anything else you would like to add?

Dr. LESSINGER. I would just like to add one last comment. I think it is consistent with Mr. Daly's and I hope that the one who looks prettiest at this table on this side won't object to my leaving, but there are a couple of comments on the questions that were raised.

I think this term "behavioral objectives" is so much pedagogese that goes on and we are off now on a systems analysis kick, but I think for once we are getting much more systematic in our use of language and I would commend some of this language to you and I want to stress this because this may be one of the keys to Congressman Hawkins' point and yours as well, Mr. Chairman.

If you look at what students gain instead of the process, if you look at the product of learning, in other words, if you focus on what students can do at the end of a program instead of what they are in the process of learning, then you get a totally different view at it.

Let me give you one example. If you are interested in youngsters learning about decimals, you want them to know the difference between zero zero three and three point zero. That is very important. That is covered in general mathematics. There isn't anything wrong with the youngster achieving that same goal, understanding 0.003, if he learns it by gaping the sparkplug in a shop class.

We have discovered that some can learn 0.003 by virtue of gapping spark plugs. If you focus on the end product you may find he is just as academically qualified even though the process by which he achieved it was not from the standard textbook, and I think if we will focus on ends we may find that our vocational programs prepare our youngsters better academically than some of the so-called academic programs.

Mr. PUCINSKI. That has been brought out in previous testimony and I am glad you raised that point. I don't know that there is any way that we can prove it statistically, but we have had testimony before our committee which would strongly indicate that actually some of the better vocational programs motivate more youngsters to go on to higher education than if they had not gone into vocational education and probably would have wound up being either a dropout or just an average student.

We had testimony that we took in Chicago among a group of youngsters who were attending vocational education programs and in each instance the youngsters were doing rather mediocre schoolwork until they were channeled into a good program by a counselor and once they got into a good vocational program their grades went up.

In one instance I recall one young fellow had four scholarships offered him and couldn't make up his mind which one to take in electrical engineering, so that I believe that this is true, that a good vocational supplemental program or supportive program can actually be the catalyst that moves this youngster on to a desire for a higher education.

You made a good point, Doctor.

Mr. LESSINGER. I think we can measure it, though. This is what I think is inherent in Mr. Daly's program. In Project Able and ES 1970, we are now forming a national network of 17 freely associated school districts from Breathitt County, Kentucky, to a district like mine, to one in Philadelphia, and so forth with an idea of trying out these approaches and measuring the results.

I call this quality assurance, so I think it is going to be possible to demonstrate through this Project Able and other things we are doing that we can actually measure by focusing on the end product.

We may very well find that some of our academic programs are very bad, they are irrelevant, and a lot of youngsters are falling by the wayside by virtue of a lack of motivation, but I am somewhat optimistic that by trying these other methods, we will find a solution.

Mr. **Pucinski**. Mr. Hawkins.

Mr. **Hawkins**. May I prevail on Mr. Lessinger to explain the connection of his schools to the Richmond plan? My understanding is that yours is but part of a larger system called the Richmond plan.

Mr. **Lessinger**. No, Congressman Hawkins; the Richmond was one of the first places that has tried out this technical-vocational approach.

Mr. **Hawkins**. We are talking about Richmond, Calif.

Mr. **Lessinger**. Right. And the kind of programs you see described as aerospace and physical fitness have that same kind of flavor, but we are independent of Richmond.

Mr. **Hawkins**. You are independent then of the so-called Richmond plan?

Mr. **Lessinger**. Yes. We are completely independent. We cover that midpeninsula area around the San Francisco Airport.

Mr. **Hawkins**. I see. Thank you.

Mr. **Pucinski**. Thank you very much, Dr. Lessinger. We are very grateful to you for your testimony.

Mr. **Lessinger**. Thank you.

Mr. **Pucinski**. Our final witness this morning is Miss Beatrice Pressley who is assistant professor at the University of Hartford, Hartford, Conn.

Miss Pressley, we have your formal statement and it will go in the record at this point. Then I suggest that you proceed in any manner that you wish. You may want to summarize it in order to give a little more time for us to ask questions. We normally adjourn here at noon, so if you would prefer to summarize your statement and then let us develop questions that is perfectly agreeable.

Your entire statement will be inserted in the record at this point.

STATEMENT OF BEATRICE PRESSLEY, ASSISTANT PROFESSOR, UNIVERSITY OF HARTFORD

Miss **Pressley**. Thank you.

(The statement referred to follows:)

STATEMENT OF BEATRICE PRESSLEY, ASSISTANT PROFESSOR, UNIVERSITY OF HARTFORD

Most people, when hearing the term guidance accept it as being a "good thing." They may not be quite certain what that good thing is or what it does, but they are pretty certain that it helps people and helping people is also a "good thing."

I believe that through an adequate guidance program or approach, a person can be helped to become the person he is capable of becoming, can be helped to achieve his fullest individual development, can become a free and responsible member of society.

Guidance and guidance programs can be effective means of aiding people to grow and become more competent and fully functioning but it is not a cure-all or a panacea. It can be seen in the context of a measurable, evaluable program which assists persons to better accomplish certain goals.

Most programs which are in existence today are primarily remedial and deal with symptomatic behavior. While there is nothing basically wrong with this approach, the remedial, coupled with a preventative approach will insure more optimal results. In operational terms, this means that we should be viewing guidance as a developmental program which would be an integral part of the total school program, rather than merely a supportive service. We are concerned about dropouts and hard-core unemployment. If something can be done to aid in the solution of such problems, we must try to discover the cause and begin to attack the situation before it becomes too great. While guidance programs in high schools are quite justifiable, many of the youths who have the greatest difficulties do not even reach the secondary school. A high school diploma is becoming more necessary but not because the credential itself is meaningful. Rather, it demonstrates that a person has evidenced motivation enough to "stick it out" for 12 years. And, this motivation is similar to the type that he will have to exhibit on the job. So, by placing emphasis on programs at the upper level of school, we have missed a great number of kids who might best benefit from a guidance approach.

Education has a responsibility to deveolp the unique qualities of each individual and should enhance his skills in science, art, social adjustment, personal philosophy, as well as vocational endeavors. The uniqueness of an individaul finds ultimate expression in highly personal activities and through education he has the opportunity to enlarge his interests, abilities, and talents. Schools are preparing pupils not only for life today but for problems that they will face years from now. Guidance personnel should be the part of the school program which exhibits interest and responsiblity for engaging pupils in a process by which their life goals and purposes are established and clarified.

Guidance, as a concept and as a service, focuses upon youth and their future. Within the school, its content is the individual and the decisions that ultimately only he can make. He is helped to estimate the probable consequences of alternative choices of action so that these probabilities can be taken into account in making a decision. While the teacher is implored to see each pupil as a distinct individual, guidance personnel are educational insurance that he will not be submerged in the group. The guidance staff is to make certain that the pupil, teacher, and parent understand the various phases of the individual's development and its impact upon his growth, adjustment, and decision-making. Guidance is the individualizing aspect of education that represents society's concern for the individual. It brings to him increased understanding of information to make wise choices and helps him to recognize, interpret, and act upon personal strengths and resources.

Every person can be helped to study and understand himself as a unique personality—growing, changing, developing in constant response to pressure and stimuli of time and place. Knowledge of self can help him to become increasingly confident, resourceful, and capable of planning for himself and initiating adjustment to environment; this self knowledge is used in making occupational decisions. An individual chooses from among available alternatives and the role of guidance is to increase the number of alternatives available to him and to broaden his horizons. The development of the capacity to think critically, to learn from past and present in order to solve future problems is the basic process with which guidance is concerned. Problem solving involves not only the intellect but takes into consideration the total organism subject to emotional distortion, emotional satisfaction, beliefs, values and environmental forces.

In this process of helping individuals to be free and responsible members of society, guidance should be helping the person to develop realistic and functional awareness of self as a worthwhile human being and potential worker.

CAREER DEVELOPMENT

Making a vocational choice is a developmental process and any guidance program concerned with vocational choice must operate with this premise in mind. Teachers and counselors must develop insight into the reasons why students are motivated to make certain career choices and recognize that this is a continuous choice. There is a growing realization that planning and placement are not solely intellectual pursuits; mere dissemination of information is not sufficient. Guidance programs should be concerned with furthering vocational development rather than fostering a specific vocational choice. (Super, THE VOCATIONAL MATURITY OF NINTH GRADE BOYS)

The schools have a large responsibility for assistance to pupils in making these occupational decisions. They must be helped to know and accept themselves and use this self knowledge in making educational and vocational choices. A man's work is an integral part of his self concept and life work plays a crucial role in the process. Borow (Conference on Implementing Career Development Theory) says that career development theory assumes that vocationally relevant behavior begins in early childhood, can be studied as an on-going process, can be related to psychological life stages and developmental tasks.

The conceptualization of career choice as a process of on-going development has been given increasing attention during the past 15 years. Regardless of the career theory one accepts—in motivational terms, a person's striving to arrive at appropriate vocational goals can be interpreted as a search for a work role which is harmonious with need structure resulting from gratification and frustrations of early life (Roe, "Early Determinants of Vocational Choice"), or search for new ego identity that marks adolescent stage (Erikson, Childhood and Society), or as an attempt to implement emerging self concept (Super, Appraising Vocational Fitness), or that vocational choice is based on self concept (Holland, "Theory of Vocational Choice") or than an individual selects a particular occupation through developing patterns of activities which take place in formative years (Ginzberg, Occupational Choice: An Approach to a General Theory)—it will still be agreed that vocational development is a continuous and synthesizing process of personal needs and resources on one hand and economic and social demands of culture on the other. An adequate program of guidance would, then, be designed to serve to broaden interests, experiences, learnings, and aspirations of the student.

SCHOOL INVOLVEMENT

While vocational development is clearly a concern of education, it has not been effectively incorporated fully into the curriculum as noted by the National Manpower Council (Education & Manpower). The relationship between education and jobs has been stressed by the Educational Policies Commission (Manpower & Education), National Manpower Commission (Policy for Skilled Manpower), American Council on Education (Man, Education, and Work), National Vocational Guidance Association (Man in World of Work). The American Vocational Association statement concerning guidance emphasizes that guidance is basically developmental in nature and that their organization supports an emphasis on the vocational aspects of guidance beginning in the elementary school and continuing throughout education. Because vocational decision-making is a continuous process, and consists of making a wide variety of choices at a number of points in a person's life, the initiating activities related to occupational decision cannot be delayed until the secondary school.

An example of a program of this type is the Developmental Career Guidance Program in Detroit which is set up to broaden the perceptual field regarding occupational opportunities and help the child make realistic plans for the future. The program stresses the developmental aspects of career knowledge, choice, and planning. The value of increased participation of business in helping the school aid the student make occupational choices has been noted and put into operation in Cleveland. An institute to develop, increase, and strengthen the competency and contributions of the middle-school teacher, administrator, and counselor in assisting urban youth to recognize the employment opportunities available to him and in sensitizing him to the unque requirements and responsibilities of job-choice and placement has been established in Hartford.

Our manpower programs have emphasized skill and vocational training and this is, of course, important if the training is pertinent and the training is related to jobs which are available in the real world. However, we find that about 80% of those who discontinue employment do not do so because of lack of skill. Lack of proper attitudes toward work, lack of concern about doing a job well, lack of flexibility and resiliency, lack of ability to get along with fellow workers or supervisors, lack of motivation to come to work each day are other reasons that people leave jobs. The mere creation of steady jobs with good wages does not insure that an individual will work for longer than a few weeks as was demonstrated in the Detroit auto industry. This is where a fundamental guidance program which is an integral part of the curriculum can be a determent to such behavior in adult life. This is why a developmental program which begins in the elementary school and in which teachers and counselors and administrators, through a team approach and through curriculum adaptation, can help the individual to develop attitudes of dignity and worth and also help them to prepare for a meaningful life through preparation in a relevant school program.

Because of the fact that many jobs now available will not exist in a very few years, because nearly 2 million jobs are being affected yearly by the impact of automation, because of abolition of discriminatory practices against minority groups, there will be greater competition for jobs at all levels of occupational skill. It becomes evident that the primary emphasis in vocational development guidance cannot be placed upon selection or choice of occupation which the student expects to enter or in which he expects to remain. Emphasis in vocational development guidance must center in a broad orientation to the world of work in its developing realities and in development of flexibility and a secure self-identity in relation to work.

Various educators and social scientists have suggested that the early initiation to awareness of the world of work is effective. Kay suggests fourth grade as a starting point (Vocational Guidance Quarterly, 1960). Tennyson & Monness observed that elementary school reading materials and social studies texts tend to distort the work world and Science Research Associates noted the same thing in another study. Others indicated that early vocational orientation may assist in reducing the ratio of dropouts. (D. A. Green) Estan & Estan have found that because of the enormous complexity of modern industrial society that children are naive and bewildered of the occupational world. I also found this to be true when serving as a school counselor. Borow reports of surveys which prominently mention the counselor as one who helped students to make vocational choices. (Conference on Implementing Career Development Theory)

Career development is an important factor in education of an individual and career development extends well beyond the acquisition of occupational information. One's values and attitudes toward work are of equal, if not greater, importance than possession of knowledge related to a particular job.

We must seek ways of making currricular provisions to reach the desired behavioral goals of career development by incorporating this field of learning into the school in an effective manner. There is not, however, justification for separate practice of vocational guidance because it is not discrete and separate from the individual as a whole. Since man's work is an integral part of his self concept, we must treat it as such. (Barry & Wolfe; Epitaph for Vocational Guidance.)

The schools have a large responsibility for assistance to pupils in making occupational decisions. They have a responsibility for an individual's preparation in the economic life of American society—thus a major responsibility in the field of manpower development. Vocational guidance can be a liberating agent in that work is treated not only as a contribution of labor to production but as a psychological basis for a sense of identity. Programs should be designed to develop understandings, abilities, and attitudes for more effective functioning which are geared to labor market needs, both in the immediate future and in recognition of long-term projections. Transition from school to job should be facilitated by anticipating problem areas and modifying behavior where necessary. In order to accomplish such goals, a coordinated approach which considers the needs of the individual, the community, and job market must be developed and/or strengthened.

RECOMMENDATIONS

The following recommendations are offered in order to assure that an adequately planned and operational program of career guidance is provided for students in our schools. An effective career development program would include:

1. broad orientation to economic realities in the world of work. This should be carried out by creative teamwork approaches of teachers, guidance personnel, and administrative staff.
2. presentation of general information about world of work in a realistic and meaningful manner from the elementary school through the secondary school. Methods of integration of information by students must be incorporated into such a program.
3. maintenance of comprehensive and up-to-date library of educational and vocational information to provide specific information about particular roles in the world of work. References to resource people should be maintained.
4. opportunities for both informal and planned, systematic observation of work. This is imperative for optimal exposure and perception of alternatives.

5. opportunities for exploration of various kinds of work so that the individual can directly relate himself to the job and the ramifications of the job to his life.

6. opportunities for counseling students in terms of decision-making process, interests and abilities. Exploration, synthesis, and confirmation of choices related for career would be included.

7. establishment of goal for precipitation of attitudinal and behavioral changes incorporating an appreciation of the values of each individual and his culture and which will encourage interaction and dialogue between school and world of work.

8. emphasis on the necessary continuity of program and approach in meeting unique needs of students through experiential and situational confrontations with peers, parents, school officials, and employers in seeking to understand the social-situational and motivational factors which affect job choice, placement, and success.

Miss **Pressley**. I would like to speak of particular points which I feel most relevant and then summarize. I will be talking about my thoughts concerning guidance in reference to career development and I have formulated these in my experience as a teacher, a school counselor, a counselor educator, consultant, and a coordinator of two vocational guidance institutes.

I believe in a guidance approach to the education of youth. Through a guidance program in which prevention of problems is emphasized, there is greater likelihood of helping people to make wise decisions, to broaden their aspirations, to develop self-knowledge, to select an appropriate occupation, and to become fully functioning members of society.

Certainly a remedial approach to problems is not inadequate, but as such, it is like adding more Band-Aids rather than removing the nail that caused the cut.

When viewed as a developmental process, a guidance program should be seen as an integral part of a total school program rather than merely an extra added attraction. If guidance can affect the lives of youngsters in a positive and beneficial manner, then, certainly it must be basic to the curriculum.

Each individual has the right to make his own decisions. However, often his preceptions of alternatives is quite narrow and the guidance program can aid him by making him more aware of the number of alternative choices available to him and the estimated probability of the consequences of the projected decision he makes.

Guidance is the individualizing aspect of education which demonstrates society's concern about the person. It is actually a kind of educational insurance that he will learn not only about the external world—but also the internal world of self—his abilities, his aptitudes, his interests.

It also helps him to understand the kinds of information he has received in relation to himself. His unique personality and his attitude toward himself, other people, and institutions will be determinants of whether or not he stays in school until graduation, obtains a job, remains employed and functions as a responsible citizen.

Making a vocational choice is a developmental process which takes place over a long period of time. This is not something one suddenly decides in his senior year of high school. A program which is designed to maximize benefit to the student, therefore, would be one in which the occupational guidance and counseling are offered before the last years of school. If the program is offered too late in the secondary school, it will miss potential dropouts. We find a great many students leaving school at 16 which might mean eighth or ninth grade for some adolescents.

Any guidance for occupational choice must be done by a counselor who takes the whole person into consideration and does not dichotomize into vocational, educational, or personal problem solving, since these are all interrelated. This bill discusses intensive counseling so it is obvious that more than dissemination of information is necessary and those qualified to do such counseling must be cognizant of the dynamics of human behavior and the motivations which influence decisions.

This cannot be done by mere aptitude test interpretation, exposure to occupational information, reading of curent job market surveys, or a computer typeout. Information must be seen as relevant by the counselee and without integration or synthesis of such data, the exposure is of limited value..

Early school experiences will influence how a child views the world of work. However, the curriculums of the schools often neglect this vital area and oftentimes causes distorted perceptions on the part of the child who is not viewed as a potential worker. We know that some of the textbooks continue this distortion.

An adequate school program should be concerend with the proper attitudes toward doing a job well, competence in basic learning which is common to all jobs, as well as for special vocation skills. A person should learn how to make the most of his capabilities and competencies in relation to career objectives.

Occuptational orientation can be a part of all academic courses, whether math or social study. The theoretical aspects of education can be fused with the practical in order to maximize the experience for the child. School staffs and industrial and business personnel can build better lines of communication so that the school does not operate as an island apart from the community.

In order to broaden interests, experiences, learning, and aspirations of the student, a career development program must be begun early in the school life of the child. This proposed bill mentions familiarizing post-elementary-school students with a broad range of occupations for which special skills are required.

In a State where 8-to-4 programs predominate, this would mean the ninth grade and I believe that this delays the value of such a necessary innovative procedure.

Because of the fact that many jobs now available will not exist in a very few years, because nearly 2 million jobs are being affected yearly by the impact of automation, and because of abolition of discriminatory practices against minority groups, there will be greater competition for jobs at all levels of occupational skill.

It becomes evident that the primary emphasis in vocational development guidance cannot be placed only upon selection or choice of occupation which the student expects to enter or in which he expects to remain. Emphasis in vocational development guidance must center in a broad orientation to the world of work, in its developing realities, and in development of flexibility and a secure self-identity in relation to work.

The schools have a large responsibility for assistance to pupils in making occupational decisions. They have a responsibility for an individual's preparation in the economic life of American society—thus a major responsibility in the field of manpower development.

Vocational guidance can be a liberating agent in that work is treated not only as a contribution of labor to production but as a psychological basis for a sense of identity. Programs should be designed to develop understandings, abilities, and attitudes for more effective functioning which are geared to labor market needs, both in the immediate future and in recognition of long-term projections.

Transition from school to job should be facilitated by anticipating problem areas and modifying behavior where necessary. In order to accomplish such goals, a coordinated approach which considers the needs of the individual, the community, and the job market must be developed and strengthened.

Mr. QUIE. Mr. Chairman.

Mr. PUCINSKI. Thank you very much, Miss Pressley.

Mr. QUIE. One thing that struck me in her testimony was she never mentioned the parents at all. How does this tie in with your schooling? I am talking about the schools and the parents and the students.

Miss PRESSLEY. As much as possible the parents should be—and I am sorry I left this out, Mr. Quie—included because certainly their influence is very much felt, especially in the early years of school.

Mr. QUIE. And you are recommending that this begin in the ninth grade; is that correct?

Miss PRESSLEY. Yes.

Mr. QUIE. You have to involve parents whether the parents are good parents or not.

Miss PRESSLEY. In the elementary school you find that you get many parents at PTA meetings. You don't find it in the high school, so if you really want to involve the parents, if you begin in the elementary school you have much more chance of influencing them.

Mr. QUIE. Is PTA involvement sufficient?

Miss PRESSLEY. What I mean is this indicates there is a much greater interest on the part of parents in elementary school children.

Mr. QUIE. Do you have any particular experience with the parents or any format to use to involve parents in this motivation to an occupational skill?

Miss PRESSLEY. We are going to be handling a plans-for-progress institute in Hartford which will run from February through June and this is an institute which is to develop and strengthen the competencies of middle school teachers, counselors, guidance personnel, and administrators in the area of vocational development for children, and what we hope to do is develop with the schools, and the youth opportunity centers, and the community, and the parents better relationships, banks of resource materials that can be used, and getting the parents into the school and getting the teachers and counselors out into the community to better understand this child in relationship to his total life.

Mr. QUIE. In other words, it isn't being done now but you have made plans for accomplishing it.

Miss PRESSLEY. There is a program in Detroit, a career development program, which does involve parents right now.

Mr. QUIE. The out-of-school program in Milwaukee is the one that I am most familiar with and does, too. I was just curious as to what your experience has been.

Miss PRESSLEY. This institute or this program in Detroit began as a plan-for-progress institute and they begin with in kindergarten, with the children, and parents, and industry.

Mr. QUIE. Thank you, Mr. Chairman.

Mr. PUCINSKI. Mr. Carey?

Mr. CAREY. Thank you, Mr. Chairman. Dr. Pressley, the reference you make to early effective vocational guidance leaves us, I think, somewhat shortsighted in this bill. You recommend that to begin earlier than the ninth grade, is that correct?

Miss PRESSLEY. Yes; at least at the seventh-grade level.

Mr. CAREY. Seventh-grade level.

Miss PRESSLEY. And I would prefer it earlier than that, but at least at seventh grade.

Mr. CAREY. And perhaps I use the wrong term here when I speak of vocational guidance. In the old traditional concept this is a system where you have possibly one guidance counselor in the large school systems for anywhere from 200 to 300 students, and you are not relating back to that kind of a guidance system, are you?

Miss PRESSLEY. This can be a program where you can still have one counselor to this many students, but the programs that are developed are such that the counselor is serving as a counselor and a consultant and planning inservice and outservice training programs for the teachers, so that the entire curriculum can be involved.

Mr. CAREY. So you get an inbreeding of counseling competence in the schoolroom teachers as a result of consultation with the professional guidance counselor and then it pervades the system.

Miss PRESSLEY. Yes; that is right.

Mr. CAREY. Do you think that that portion of the bill that sets up fellowships and exchanges in State cooperative programs would be able to accomplish this objective? Are you familiar with that portion of this bill?

Miss PRESSLEY. I think it would be a beginning. I don't think there is enough money involved nor is it spelled out well enough that this will be accomplished in enough places. I think we really need more money for demonstration projects to indicate what the tone of this kind of program should be and I don't think there is enough money involved right now for that.

Mr. CAREY. This would be especially true in the large city school systems where they are moving now away from the old diachotomy and vocation and prep school educational tracts into the so-called comprehensive school pattern.

This is where you would need this kind of approach to build this up as soon as possible to get the generalization now of vocational and academic education paired together?

Miss PRESSLEY. Yes. Classroom teachers are not career oriented as far as their own particular subject matter goes and if this program is to be effective and you do consider career development as a total lifetime ongoing process, then certainly this cannot be a program where the kid sees a counselor 15 minutes during a year.

It is going to have to be part of his total curricular experience.

Mr. CAREY. To achieve this then—this, I think, illustrates what a previous witness said, that the name of education in the country today is changed—can we secure this change under this kind of legislation if we are locked into the historical Federal-State relationships or do you conceive of this generation of vocational education support by the Federal Government as one in which the Commissioner would work with States and distinctly with local educational agencies and with private nonprofit organizations and groups so that you would have a mix of approaches to achieve this end?

Miss PRESSLEY. Yes.

Mr. CAREY. Which do you prefer now? The traditional Federal-State or the combination?

Miss PRESSLEY. I would like the combination and I would also like to see in any aspects of our vocational education program that the State departments that are involved are not just vocational education, but the guidance programs in the States because I think there is a different orientation. I think these two should be brought together in this important problem.

Mr. CAREY. To tie in the high school, the junior high, and vocational education program with career development as early as the lower elementary grades do you see some possibility here of forging more linkage between the industrial arts programs, wherever they may be, and the follow-on career development?

No one has said much about industrial arts here but this is the first touch that the young student has with some kind of career association, isn't that true?

Miss PRESSLEY. Yes, and very often this is in the seventh grade, sometimes in the earlier elementary school, but very often in the seventh grade with various programs.

Mr. CAREY. Thank you, Dr. Pressley. Thank you, Mr. Chairman.

Mr. PUCINSKI. Mr. Dellenback?

Mr. DELLENBACK. Thank you, Mr. Chairman.

Dr. Pressley, I am interested very much in what I read on pages 6 and 7 primarily of your testimony where you deal, it seems to me, with broad concepts rather than with narrow skill concepts and you say that:

> It becomes evident that the primary emphasis in vocational development guidance cannot be placed upon selection or choice of occupation * * *.

You go on and say that the emphasis must center in a broad orientation to the world of work, in development of flexibility, and secure self-identity.

Do I read you as saying that we aren't talking here about guidance or counseling into specific fields, but you are talking about guidance and counseling in the development of broad attitudes toward life and toward a world of work?

Miss PRESSLEY. Yes, I do not believe that we can train an individual for a specific skill and expect that the attitudes are necessarily going to be involved because I think we have to be concerned about the attitudes toward work first.

An example would be the auto industry in Detroit. We have developed jobs there and found out within a 6-month period there was a 90-percent turnover. The jobs were there and they were well-paying jobs and people were not staying on the jobs. I found in some of the employment centers that there are a number of people who come in for a job and 2 weeks later they are back for another job.

It is not because they don't have the skills; it is because something in their attitude is lacking so that they don't see any reason for coming every day, when it rains, or don't understand how to get along with their peers or with their supervisors, and I think that this is the thing that must be emphasized rather than just specific skills because if he has the skill and doesn't get along with the supervisor he is much more likely to leave.

Mr. DELLENBACK. This is very interesting to me and I think we are talking here about a point of major importance because very frequently when we talk with people about vocational education we are talking about skill training.

It seems to me that very frequently a person who is advocating moving ahead with vocational education is talking about training somebody in a certain type of shopwork or training somebody in what to do with a nursing skill, or something of this nature, so when you talk about beginning this back at a very early age you aren't suggesting that we take ninth graders or seventh graders or fourth graders and start to train them in welding or start to train them in taking motors apart? You are talking about proper attitudes, and again I quote from your paper.

You talk about proper attitudes toward work, concern about doing a job well, flexibility and resiliency, ability to get along with fellow workers, motivation to come to work, and so on.

These are the basics that you are talking about?

Miss PRESSLEY. Yes; not skill training. I think it would be a very poor idea to train a ninth grader in a specific skill, especially when you might find that 3 years later before he graduated the job wasn't there anymore.

Mr. DELLENBACK. Do you also have attitudes toward training in special skills? Do you feel these are desirable as part of the curriculum in public education, secondary education? Should we, for example, and you pick the level, the ninth grade, 10th grade, 11th grade, or 12th grade, start to train our young people in skills also?

Miss PRESSLEY. I think this is feasible as long as this is not something that is extremely narrow and he learns only to do one thing and he only learns skills and the skills are taught in isolation from his total life, that any information that we give him must be relevant to him as a person and any skill must be the same thing, so that it is not that I believe that skill training is an incorrect approach, but I think it must be broad enough so that he can transfer these skills to other particular jobs, that he is not trained only in one small, narrow area.

Mr. DELLENBACK. Again, I didn't get all of Dr. Lessinger's testimony but I gather that he was here, in part talking about using skills as the way to train in broader concepts. Instead of teaching elementary mathematics and then applying it to how to space-gap an engine, he was saying if we get a youngster who is interested in automobile mechanics, we can, through the road of gapping engines, teach him something about decimals.

Do you feel it is important in the area of vocational education to use skills as areas of training?

Miss **Pressley**. I think that is quite adequate except that we find in many vocational programs boys like to work with cars and so they want to be an auto mechanic because the car is a nice thing and you get lots of kids in this kind of program. I think that one reason that their interests have not really crystalized is they really are not aware of their broad areas of interest, so that this is one way of doing it, but I would also like to make sure that he has explored enough of his various interests so that he is not limiting himself because of a very narrow range of alternatives that he recognizes.

Mr. **Dellenback**. But primarily it seems to you critically important that the educational process be one of training in these program areas we touched on a minute ago, and again you touched on, concern about doing the job well and so on, is that correct?

Miss **Pressley**. Yes; this is my primary concern.

Mr. **Dellenback**. Basically, as we all know, this is a rough world of crises where the ideal world is what we really would reach for and we find that our reach exceeds our grasp in truth and we don't have enough money to do everything we ought to do.

If we have to make choices between intensified counseling and guidance programs in the higher secondary grades across the board or going down in isolated cases into the lower grades, which do you feel we should emphasize?

Miss **Pressley**. I don't like your reference to the isolated instances in the lower grades. I do feel that some of the adolescents that we are most concerned about will not be in school if you wait too long in the secondary school.

The boy who graduates from high school has indicated that he has some motivation to finish school. He stuck it out for 12 years. This indicates that he has some motivation which also will direct him in a particular job. I am concerned about the boy who quits at eighth grade who is 16 years old and doesn't have this motivation and doesn't indicate it and is going to go out there and is going to be unemployed because he doesn't know what he wants to do and doesn't want to stay in school.

Mr. **Dellenback**. With the counseling depth that you are really advocating, how many pupils can one counselor handle in the public school system?

Miss **Pressley**. I think that a counselor can adequately handle 250 or 300 if he is not concerned just about counseling but also helps develop curriculum, serves to consult the teachers, develops programs, inservice programs primarily, to help the whole school as a guidance-oriented program rather than just individual counseling with students.

With group counseling procedures and group guidance procedures you can reach a number of students. I would prefer that the ratio is about 1 to 200 but I think it can be adequately done with 1 to 250.

Mr. **Dellenback**. Have you worked out the mathematics of this to know how much time that counselor or guidance person could spend with any individual student?

Miss **Pressley**. We did it with 1 to 180 and figured out he could spend about 8 hours of individual counseling with each student.

Mr. **Dellenback**. That is in the course of a school year?

Miss. **Pressley**. Yes, sir, and if you talk about group procedures then he would have more.

Mr. DELLENBACK. Are there enough trained guidance persons at the present time available for this type of counseling across the board?

Miss PRESSLEY. There aren't right now. This is one of the problems.

Mr. DELLENBACK. There are not?

Miss PRESSLEY. There are not. In Connecticut we do not train enough counselors for the jobs in the State. There has been talk of developing a 2-year program and I did a survey 2 years ago of counselor education institutions and several of them indicated that they could not go into 2-year programs because they couldn't adequately fill the positions in their State with the 1-year programs they were offering then, but there just are not enough counselors.

Mr. DELLENBACK. So that one of the really sore spots in this type of concept is we must go back and train many more guidance or counselor people.

Miss PRESSLEY. Certainly and many more elementary counselors because NDEA programs did not allow elementary counselors in until I think two years ago and this is a real problem we have. We have so few elementary counselors.

Mr. DELLENBACK. Back again to my hard choice because we constantly find ourselves facing this type thing. If we had to make a choice would you feel counseling was more important in the highest grades of secondary education, in the middle grades, lower or secondary and higher elementary or down the line still further and into lower elementary grades?

Miss PRESSLEY. I would like to begin at the highest in fifth grade and one of the problems that can be solved in the upper secondary school would be utilizing the services of, say, the employment service which does testing, which does placement, and does counseling, and use these people in addition to the regular school staff, and, consequently, we could move more counselors in the lower levels of schools.

Mr. DELLENBACK. Let's assume we had enough counselors to take care of three grades adequately and so our choice is 10 through 12, seven through nine, or four through six. Which of these levels would you use our counselors in? The four-to-six level, the seven-to-nine level, or the 10-to-12 level?

Miss PRESSLEY. If we had three counselors I would put two in the upper level and one in the middle level. I would not concentrate all three at the upper level.

Mr. DELLENBACK. But, on the other hand, you would not shift the emphasis down and just guide and counsel in four to six and then let them go beyond that time.

Miss PRESSLEY. I don't think that you can work in a four-to-six program and that leaves a kid on his own with no help. There has to be someone to follow this group.

Mr. DELLENBACK. So, as we expand it then, we must expand it from the higher levels back down to the lower levels instead of starting at the lower levels and then moving up.

Miss PRESSLEY. Well, this is where it operates at present, so that if a counselor is in a school he is in the high school, and the next counselor is usually added in the junior high school, and then if there are enough in the junior and senior high schools then he is moved into the elementary school, so there are very few programs where there are no counselors at all.

Mr. **Dellenback**. But I was asking, in effect, which way you would move it and would you accept that we have to move it back down as more money becomes available and more counselors, instead of wiping it out at the top level and shifting the emphasis to the lower levels.

Miss **Pressley**. Yes. I think it would be a mistake to wipe it out. In the ongoing process you must have follow up and you can't leave a kid at the end of sixth grade or seventh grade or eighth grade, but he must have some support as he continues in school.

Mr. **Dellenback**. Just one more question then. It would not be sufficient, I gather, under your idea of guidance and counseling, to have counselors who were just trained in skills. These must be people with a broad range of training because they must deal with these youngsters and have academic emphases in their own right; they must have skill or vocational emphases, in their own right; they must be able to counsel a youngster into an academic pursuit or into a skilled pursuit or into a neutral approach; is that correct?

Miss **Pressley**. Yes; he would have to have a broad range of knowledge.

Mr. **Dellenback**. Many counselors existing today really don't have that range of skill or knowledge, do they?

Miss **Pressely**. No. This is why the training programs should be more adequate, perhaps 2-year programs, but if you have a 2-year program it is very difficult to support yourself during that 2-year program. The NDEA programs have helped along this way, but certainly we need to train people beyond a 1-year master's level, but in order to do this there has to be ways of supporting this person during school.

Mr. **Dellenback**. Would it be better to have one well-trained counselor or two not so well trained?

Miss **Pressley**. One well-trained counselor.

Mr. **Dellenback**. Thank you, Mr. Chairman.

Mr. **Pucinski**. Thank you very much. Counsel?

Mr. **Jennings**. No questions.

Mr. **Pucinski**. Miss Pressley, I think you have certainly brought into sharp focus one of the most important aspects of this legislation. There is no question that you can have the best educational programs in the world, but if you don't have good counseling to steer these youngsters into these programs they are going to fall by the wayside, and we have had testimony before this committee which clearly indicates that in many instances a good counselor has made the difference between seeing a youngster go on to education and seeing him become a dropout.

I am impressed by your statement that you would like to start at the earlier age level. I think that you are absolutely right. I think these youngsters have to have some adequate, efficient counseling much earlier than they are getting it now and if I had my choice I certainly would give counseling the highest priority in this bill in developing teachers and counselors because it seems to me, as Mr. Carey has frequently talked about the disruptive child, a counselor could deal with this problem a good deal more effectively than the people that we now have dealing with it, the principal or the teacher herself, so I think your testimony this morning is extremely helpful to us and I want to thank you for taking the time to come down and spend a morning with us.

Does anybody have any further questions of Mr. Daly?

Well, we have had three excellent witnesses this morning which I think put the practical experiences into focus on this legislation and we want to thank all of you for being with us. Thank you very much.

The committee will stand adjourned until 10 o'clock tomorrow morning.

(Whereupon, at 12:05 p.m., the subcommittee recessed to reconvene at 10 a.m., Thursday, February 1, 1968.)

VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

THURSDAY, FEBRUARY 1, 1968

HOUSE OF REPRESENTATIVES,
GENERAL SUBCOMMITTEE ON EDUCATION
OF THE COMMITTEE ON EDUCATION AND LABOR,
Washington, D.C.

The subcommittee met at 9:45 a.m., pursuant to recess, in room 2175, Rayburn House Office Building, Hon. James H. Scheuer presiding.

Present: Representatives Pucinski, Scheuer, Hawkins, Hathaway, Scherle, and Dellenback.

Also present: John Jennings, counsel; Sharlene Pearlman, education director; Mattie Maynard, clerk; Michael Murray, research assistant; Charles Radcliffe, special education counsel for minority; and Philip Rockefeller, assistant education counsel for minority.

Mr. SCHEUER. The meeting will come to order.

This is the General Subcommittee on Education of the Committee on Education and Labor and we are having a hearing this morning on H.R. 8525, the Vocational Education Improvement Act of 1967.

Congressman Pucinski, who is chairman of this subcommittee, has been delayed for a few moments and he has asked me—I am Congressman Scheuer from New York—to hold the fort for just a few moments and start the hearing. He will take over as soon as he gets here.

Secretary Willard Wirtz is testifying this morning at 11 o'clock on the administration proposal for a national safety bill, so I think the plan is that we will hold this hearing until about 5 minutes to 11.

We do have two witnesses this morning so what I am going to suggest to both of the distinguished witnesses is that at the start of their testimony their prepared statement will be printed in its entirety in the record and they might start out with a brief summary of their statements and then we can have a discussion with each of the witnesses for 20 or 25 minutes and use the time for questions.

The first witness is Prof. Jacob J. Kaufman, director of the Institute for Research on Human Resources of Pennsylvania State University.

We are very happy to welcome you here this morning, Professor Kaufman. Your statement will be printed in its entirety in the record. We would be happy to have you summarize it and then, I am sure, members of the committee will have some questions to ask of you.

STATEMENT OF PROF. JACOB J. KAUFMAN, DIRECTOR, INSTITUTE FOR RESEARCH ON HUMAN RESOURCES, PENNSYLVANIA STATE UNIVERSITY

Mr. KAUFMAN. Thank you, Mr. Scheuer.

(The statement referred to follows:)

STATEMENT OF JACOB J. KAUFMAN, PROFESSOR OF ECONOMICS AND DIRECTOR, INSTITUTE FOR RESEARCH ON HUMAN RESOURCES, PENNSYLVANIA STATE UNIVERSITY

I. INTRODUCTION

My name is Jacob J. Kaufman. I am a Professor of Economics and the Director of the Institute for Research on Human Resources at The Pennsylvania State University.

The Institute for Research on Human Resources has, for a number of years, been conducting a variety of studies dealing with various aspects of the development and utilization of human resources. We have been concerned with problems affecting the unemployed, school dropouts and, particularly, vocational education.

Our interests in vocational education has resulted in the publication of a report titled *The Role of the Secondary Schools in the Preparation of Youth for Employment*. This study was the result of the combined efforts of myself, a labor economist; Carl J. Schaefer, Head of the Department of Vocational-Technical Education at Rutgers-The State University; and Morgan V. Lewis, a psychologist, who is a research associate at the Institute for Research on Human Resources.

In this study we attempted to evaluate vocational education programs in nine cities. These included Baltimore, Cleveland, Philadelphia, Altoona (Pennsylvania), Atlantic City, Findlay (Ohio), Allentown (Pennsylvania), Trenton (New Jersey), and Camden County (New Jersey). In these nine cities we interviewed approximately 5,200 graduates of the vocational, academic, and general curricula. We also obtained mail questionnaires from 3,200 graduates. These graduates were equally divided between boys and girls. Essentially in these interviews we were able to obtain information on such broad issues as their earnings, employment and the evaluation of the education they received while in school. We were also interested in the extent to which they felt "satisfied" on their jobs.

In addition, we obtained ratings from over 2,800 direct supervisors of these graduates, which were designed to give us some evaluation of the education and training that these youngsters received. In the course of this study we conducted a survey of the attitudes of 1,600 teachers towards vocational education. We also interviewed somewhat more than 650 employers and about 90 union officials.

An essential part of this study was the visiting of approximately 25 vocational schools in the nine cities which cooperated with us in this study. These visits were made by groups of experts in the field of vocational education.

In a second study, which involved an experimental program with school dropouts, we conducted skill training and academic programs for about 100 youngsters which were designed to determine the extent to which the diploma was an important key to future employment. The final results of this study are not yet available but we are in the process of completing a rather detailed report on the effectiveness of the actual school programs conducted and the role that vocational education might play in the reeducation of school dropouts.

Third, I would like to point out that we are currently involved in a study of the cost-effectiveness of vocational education as compared with academic education. In this study we have obtained replies from nearly 2,000 graduates who have also provided us with information on their earnings, employment, and other experiences after graduation. We have obtained information, either by mail questionnaires or personal interviews, from approximately 500 school dropouts. In addition, we are exploring, on the basis of interviews with 150 employers, the extent to which employers find gradautes of vocational education less costly to train on the job.

Finally, I would like to point out that Carl J. Schaefer and I are currently involved in a study of vocational education for the Commonwealth of Massachusetts and have been visiting a number of schools in that state, as well as conducting interviews with various persons, in connection with the direction that vocational education should take.

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I am citing these studies and surveys in order to indicate to you the basis on which some of the recommendations, which will be made in the latter part of this statement, are based.

In the preparation of the statement that follows I want to acknowledge the fact that it represents the joint efforts and views of Morgan V. Lewis and myself.

II. THE EVALUATION AND POTENTIAL OF VOCATIONAL EDUCATION

A review of the results of various reports prepared by the Institute for Research on Human Resources at The Pennsylvania State University and other studies would tend to lead one to the conclusion that traditional vocational education should be expanded. There is certainly much evidence that points to the success of vocational education. Vocational graduates thought that they were better prepared for their jobs than graduates of the academic or general curriculum. Vocational graduates experienced less unemployment, had more rapid increases in earnings, and received, on the average, higher monthly incomes. Even when the higher costs of vocational training are entered into the equation, vocational education still yielded a higher return.

All of this evidence testifies to the success that vocational education has had with its students. To say this, however, is not the same as saying that traditional vocational education should be made available to more students. In fact, it could be argued, especially for males, that specific skill training is being given to too many students. Less than half of the boys who completed technical or trade and industrial programs found employment in the areas for which they were directly trained. With larger enrollments it seems unlikely that even this proportion would be maintained.

The proportion of vocational graduates who obtained jobs that were related to their training is only one of the number of considerations that caution against the facile recommendation that vocational education, in its traditional form, be expanded. It is argued that the strength of vocational education does not necessarily lie in its ability to give specific skill training. Rather its strength lies in its potential to enhance the relevance of the high school experiences of the large proporton of students to whom school is presently boring and frustrating.

This boredom and frustration stems from the inability of the schools to find ways of reaching those students who are neither going on to college nor willing or able to meet the requirements of the vocational curriculum. These students enter the labor market after leaving school and begin a process that has been described as "floundering," as they move from one job to another. They are unsure of the type of work they wish to do and are unable to formulate and carry out vocational plans.

These students are not those who are usually referred to as the "culturally deprived" or "culturally disadvantaged." The disadvantaged are a different group with all of the problems of the students described above plus the additional problems that stem from their impoverished circumstances. These include alienation from society, inadequate preparaton for school tasks, a life style incompatible with school requirements, insufficient family support, and an absence of successful role models.

These latter traits do not characterize the typical student who drifts through the general curriculum. Students who enter the general curriculum usually come from homes where the necessities of life have been provided. Their families are relatively stable. They have usually internalized the goal of upward occupational mobility. They do not, however, see the relevance of their high school experiences to this goal. These students have assessed their opportunities of entering college and, in many cases, realistically concluded that these opportunities are limited to them. They may have also found that the requirements for entering, let alone completing, a vocational curriculum are too high. In a similar manner they conclude that the skilled trades are closed to them, either because of union restrictions or because of restrictive employer policies. Most other occupations are either unknown or considered too difficult because of the job requirements.

As schools are presently constituted, they have nothing to offer these students. These are, however, precisely the students that a reoriented type of vocational education could serve. The industrial arts programs which are usually given as part of the general curriculum make an attempt to provide the occupational exploration which these students need. But, according to one study, they fall far short of this goal.[1] They enroll too few students for too little time with too little exposure to occupations. They are primarily programs offered in the junior high school in a few areas—mainly woodworking, drafting, and metalworking. As serious as these limitations are, they are not the most crucial one. The most serious is the failure to integrate the industrial arts programs with the other courses in the curriculum.

In the type of vocational education that is recommended, skill training would provide a means, other than verbal, for self-expression. It would bring meaning and relevance to the study of the other elements of the curriculum, such as mathematics, science, social studies, and communications. The total curriculum would attempt to foster in its students a positive orientation to their future vocational lives. It would attempt to develop responsible work habits as well as the attitude that one can plan and control his vocational life. The curriculum would do this while, at the same time, it provided the opportunity to explore and learn the nature of fundamental vocational skills that can be transferred to a variety of occupations.

The evidence and thinking that have led to these recommendations are presented in detail below. This statement has the following organization: the evidence gathered in this study is presented and, because evaluations are rarely all black or all white, it is grouped into those findings that are generally favorable and those that are generally unfavorable to vocational education. Drawing on these data, the reasons why traditional education should not be expanded are presented. To say traditional vocational education should not be expanded is not to say that it should be abolished. There is need for the traditional programs and most of the evidence indicates that they have served those students who have taken them. The pressing need for expansion, however, is not along traditional lines. Given limited educational resources, consideration should be given to using these resources for the occupational training of a large proportion of students. The need is for programs that utilize the special features of vocational education to bring relevance to the school experiences of those students who are not served by any of the existing curricula. Some experimental programs which are attempting to incorporate these features are described.

In the final section of this statement four other issues that have arisen are considered. These are: the degree to which vocational offerings should be matched to labor market needs; whether vocational education should be conducted in a comprehensive high school, an area vocational high school or a separate vocational-technical high school; the role of vocational guidance and counseling, and the role of vocational education in the training of girls and Negroes. In conclusion, specific recommendations with respect to vocational education are made.

The Evidence on Vocational Education

Before reviewing both the favorable and unfavorable evidence on vocational education, the basic difference in the nature of vocational education for males and females should be noted. Using the number of enrollments as a criterion, the only significant vocational program for females is office occupations. The skills learned in this program can be applied in almost any office and in any type of organization. The amount of on-the-job training needed to make an office worker fully productive is usually minimal.

The labor market that males face is quite different. The skills that males acquire in their vocational programs do not have as wide a market as office skills. Even if a young man finds a job that uses the skills he has learned, it is usually as an advance learner—not as a fully qualified worker. He must be prepared to undergo several additional years of training, often at lower pay than he could earn in other jobs. And the chances are less than 50:50 that he will obtain a job where he uses the skills he has studied.

In addition, the selection of the vocational curriculum limits the kinds of post-high school education the graduate can obtain. In light of these considerations it is not surprising that relatively far fewer males than females select the vocational curriculum.

Even more powerful than these quite realistic considerations may be the psychological "acceptability" of the vocational curriculum for males. Males in our society, more than females, are supposed to "succeed" in life. Success is usually defined in terms of upward occupational mobility. Sociological investigations usually conclude that there is, in reality, very little such mobility. But the popular myth remains. And education, primarily college education, is seen as the main avenue for such mobility. With this prevailing set of social values vocational education is regarded as acceptable only for those males who "just don't have it" for college.

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[1] Schmitt, M. L., and Pelley, A. L. *Industrial Arts Education*, U.S. Office of Education, Washington, D.C.: U.S. Government Printing Office, OE 33038, 1966.

Vocational education is thus a fundamentally different experience for males. For girls it is acceptable, well suited to their plans (primarily marriage), and offers high potential for immediate employment. For boys it is a much more risky venture. It may well limit their future options, it is questionable whether they will use the skills they study, and it suggests the acceptance of second-class status.

The Favorable Evidence.—The evaluations which were most favorable for vocational education were derived from the work histories of the respondents. These consisted of three indices of vocational experience covering the period from the date the repsondents were graduated until the date they were interviewed. The indices reflected average monthly earnings, earnings progression from first to current job, and the per cent of time employed.

The significance of these indices was evaluated by multiple regression analysis. This analysis included simultaneous estimates of the effects of other variables, besides curriculum, which might have influenced the indices. These other variables included: Sex, race, city, whether or not post-high school training was taken, and whether or not high school training was related to employment. The analysis yielded a carefully controlled estimate of the separate influence of curriculum. On all three indices the vocational graduates fared significantly better, that is, they had higher average monthly earnings, more rapid increases in earnings, and were employed a greater proportion of the time that they were available for employment.

The measures of the first job experience were not quite so positive. The vocational graduates considered themselves better prepared for their first jobs. They mentioned more frequently the courses that had helped to prepare them and rated these courses more favorably than the graduates of the academic or general curriculum. With regard to job experience, however, the vocational graduates were not more satisfied with their first jobs than the graduates of the other curricula. They earned as much money, to start, but they did not earn more money. Their direct supervisors rated them as well prepared as graduates of the other curricula, but not as better prepared.

These findings are not negative, but neither are they positive. Differences which might have been expected were not found. It seemed reasonable to assume, *a priori*, that vocational graduates would do better on these various criteria, but they did not. The vocational curriculum did not appear to have given its graduates any advantage on these measures of actual experience on the first jobs.

The "on-site" evaluations of the various vocational programs typically yielded ratings of satisfactory or better. The distributive education, home economics, and office occupations programs received the highest average ratings. The trade and industrial and technical programs had few handicaps which lowered their ratings but they were, generally, still favorable. Technical education did not seem to be comfortably situated at the secondary school level. The offerings in the trade and industrial program covered a broad spectrum and the average ratings tended to be lowered by the poorer ones. General agriculture was only offered in one school system, and when it was evaluated, it was not organized as a vocational program.

Each program was rated on several categories. Instructional staff received the highest average rating, a 4.25 out of a maximum of 5.00. The teachers were well-trained in their skill areas and personally dedicated. The aims and objectives of the programs and the organization of instruction were also highly rated. Physical facilities received satisfactory ratings. Guidance, placement, and follow-up received the lowest average rating and in the technical and trade and industrial programs it was rated as less than satisfactory. The ratings were confirmed by the results of the interviews of the graduates which are discussed in the next section.

The Unfavorable Evidence.—Some of the evidence already presented could be regarded as unfavorable. The failure to find higher supervisor ratings for vocational graduates is an example. The evidence that will be presented in this section, however, is not equivocal. It is clearly negative. Essentially this evidence was grouped in four areas: (1) the enrollment in vocational education; (2) the match between this enrollment and needs of the local labor market;

(3) vocational guidance; and (4) the attitudes of male graduates of the vocational curriculum who attended comprehensive schools.

The most damaging indictment of vocational education is the disparity between the number of young people who enter the labor market and the number who receive vocational preparation. In the cities studied, approximately one-third of the high school graduates enter college. The other two-thirds enter the labor market or take some form of non-baccalaureate training. Yet only 30 per cent of the tenth to twelfth grade enrollment—both male and female—received vocational preparation. If office occupations are excluded, the enrollment figure falls to seven per cent.

Not only was the proportion to these enrollments low, but it tended to be out of alignment with the occupational patterns of the labor markets in the cities. Once again the office occupations programs were the exception. These programs had sizeable enrollments and there was a brisk demand for workers. In the other areas, however, there was little congruence. Distributive education showed the greatest imbalance. In all three cities clerks and salespeople comprised one of the largest proportions of the labor force. Despite this demand, distributive education enrolled a small proportion of the vocational students. This situation existed even though the distributive education programs received superior ratings. It seems that the imbalance may have been caused by factors beyond the control of the educator, such as the prevailing image that the only job that distributive education prepares one for is that of a dimestore clerk.

The technical and trade and industrial programs faced a different kind of problem. They attracted about 10 per cent of the total male enrollment and had labor markets with apparent high demand. But less than half of their graduates found jobs that were related to their training. The per cent who obtained related employment is, in itself, one of the most critical findings of this study.

Whether or not vocational education should attempt to meet local labor market needs is discussed in a later section. At this point it can be said that, using a standard that vocational educators have set for themselves and except for office occupations, vocational programs are not meeting the needs of their communities.

The weaknesses in vocational guidance were noted both in the on-site evaluations and in the results of the interviews of the graduates. Most counselors worked with an excessive load of students. And, though they were generally adequately prepared as counselors, they lacked specific preparation in vocational areas. Only about one-half of the vocational graduates recalled discussing their course choices with a counselor while about one-fourth recalled discussing job plans. The proportions of graduates of the academic and general curricula who received counseling were only a little higher. The implications of these figures are discussed in a separate section.

The final set of negative evidence on vocational education was the per cent of its male graduates from comprehensive schools who felt "looked-down on" because of the courses they took. Despite the strong wording of the question, approximately one-third of the vocational males who attend schools where they came in daily contact with the academic and general curriculum students admitted they felt "looked-down on." This finding has considerable importance for students who attend an area vocational-technical school on a part-time basis. This issue is also discussed in a separate section.

A New Direction for Vocational Education

Upon reviewing all the evidence presented above, it is concluded that, given our limited educational resources, it would be a mistake to expand vocational education along traditional lines. At the same time it is recognized that vocational education does have several desirable features that can be used to serve those students who are currently ignored by all curricula. What is needed is an organization of the vocational offerings that encourages the individual to explore his own interests. Such an organization would acquaint a young person with the nature of various types of occupations while at the same time would offer the opportunity for self-expression through other than verbal means.

It is, therefore, recommended that vocational education be reoriented in this direction because—

(1) Of the large number of students who enter the labor force without any type of occupational preparation;

(2) Of the limited opportunities young people have to explore their vocational interests in the present labor market;

(3) Of changing technology which continually renders many types of skills obsolete;

(4) Of the evidence that less than one-half of the young men who study specific skills obtain jobs that used these skills;

(5) Of the ability requirements of many traditional vocational programs which exclude young people who need vocational preparation;

(6) Of the lack of stability in the specific vocational plans of young people—a vocational area may be predicted but specific occupations cannot;

(7) Graduates of trade and industrial programs tend to be hired by small employers who are becoming less numerous;

(8) The unique quality of vocational education has the potential to make school a more relevant experience, particularly for those students who are presently bored and frustrated by the abstract verbal orientation in most high school courses.

The sizeable proportion of students who do not enter the academic or the vocational curriculum has been documented. The general curriculum students do not, as a rule, select the general curriculum. Instead, they enter it through default. They may have been convinced by their previous school experiences that they are not "college material." They are unsure of their vocational interests and consequently unwilling to make a commitment to a particular vocational area. They drift through school taking undemanding academic courses and industrial arts courses. Schools do not know what to offer these students and the students realize it.

Vocational education, provided it developed new approaches, could serve these young people well for it provides a different style of education. The prevailing concept of the proper type of school dates back to the medieval style of formal higher education. The universities of that time were designed to meet the needs of the time. The scholars and scarce books were gathered in a few locations and students went to these locations to live and to study. During classes, the professor lectured and the students listened respectfully. At other times the students occupied themselves in individual reading and studying.

The conditions that produced this style of education have long since disappeared, but the tradition continues. Teachers are still expected to be skilled lecturers. Students are still supposed to sit quietly, ask interested questions, and acquire "knowledge" in its written and spoken forms. This model may serve the youngsters who are going on to college because it prepares them for the type of instruction they will receive there. But it is antithetical to the needs of other students who represent a majority.

The style of vocational education, at least in the shops, is just the opposite. The emphasis is on doing things which yield an intrinsic satisfaction of personal accomplishment. The instruction tends to be more individualized and a variety of media is employed. The ways of expressing oneself are not solely verbal. The atmosphere of the shop is more relaxed and the students may move about freely. And, perhaps most important, the student sees some relationship among the various subjects and between the curriculum and what he will eventually do in life.

Some Experimental Program.—In some school systems experimental programs have been introduced with most of the features described above. A few illustrations are in order. One, known as the "Richmond Plan," is being conducted in high schools in Richmond, California. Subsequently, other school systems in California have inaugurated this program. It is designed for those students who have the ability for the academic curriculum but who are not attracted to it. Many are considered poor students and some can be identified as potential dropouts.

The courses are organized so that the students can see the relationship among them. The interrelationship among the subjects has been described as follows:

> As an example of how the subjects are coordinated to reinforce each other, the study of heat taught in the physics class is related in mathematics instruction to first-degree equations (necessary for linear expansion), supported in the laboratory by the construction of apparatus with which to conduct heat experiments and followed in English by oral and written reports on the subject.[2]

Another program, Project FEAST (Food Education and Service Technology), conducted in the San Francisco and other areas, attempts to bring about the same integration of courses in a less complex field. Business and English courses are coordinated with instruction in food preparation and cafeteria work. The program provides the student with the training required either for additional formal education or for immediate employment. It contains, as well, the features of cooperative work programs.

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[2] Draper, D. C. *Educating for Work.* Washington, D.C.: The National Association of Secondary School Principals, 1967, pp. 44–45.

The strength of these programs lies in their efforts to integrate the various courses and elements in the curriculum and to relate them to future occupational goals. Both programs, however, provide training within rather limited fields and require some commitment to an occupation in that field. They do not maximize opportunities for exploration.

Is it possible to develop a curriculum that would provide training in general vocational skills and at the same time acquaint youngsters with the nature of various occupations? Research being conducted by the American Institutes for Research in Quincy, Massachusetts suggests that it is possible.[3] Thirty-one representative occupations have been studied and, it is reported, "... an orderly domain of general vocational capabilities has not been identified."[4]

There appears to be an underlying continuum in this domain which is labeled hardware at one end and people at the other. Along this continuum, mechanical, electrical, spatial, chemical-biological, symbolic, and human relations skills are located. Each of these skill areas is represented in a number of occupations. Training in the various skills represented in these areas could provide both the basic skill acquisition and occupational familiarization that the vocationally undecided youngster requires.

The programs described above are experimental in nature. Hopefully, their evaluation will provide the data necessary to design a basic vocational curriculum. Educators, however, do not have to wait until all the experiments are completed and all the results are known. Almost every school is confronted with a sizeable group of students who are currently not profiting from their school experiences. They are called "reluctant learners" or "under-achievers." Most schools do little for such students, but with relatively small additional expenditures, coupled with a real commitment to help these students, much can be done.

The city of Hudson, Ohio, provides an example of what can be done with a minimum of outside guidance and technical assistance.[5] Although 80 per cent of the graduates in the city of Hudson entered two- or four-term colleges, only about 30 percent were completing college. It is reported that, "The remaining 20 per cent of our student body were enrolled in what we called a general course. It consisted of watered-down college preparatory courses, plus good industrial arts, home economics, and business education facilities."[6] The decision was made to do away with the general curriculum and to introduce a prevocational educational program. The following quotation describes the objective of the program:

"It is not our purpose to turn out skilled technicians—this is not practical, nor what industry wants—but to develop in our young people the interests, attitudes, and competencies which can be generalized to meet the changes of jobs, the technological developments, and the demands of mobility which every individual will encounter during his lifetime."[7]

To achieve this objective existing shop and laboratory facilities are used for occupational familiarization. A vocational information course is offered. Courses in sociology, career psychology, and family living are given to help the students understand themselves and others. In English courses textbooks and traditional materials have been replaced with experiences which stimulate word flow—both oral and written. The aim is to make the student want to express himself and to be less concerned with correct spelling and usage. The emphasis is always on the "here and now"—events which have personal relevance to the students.

The Hudson, Ohio experience points to the direction of what can be done at a local level to serve those students usually neglected. There are a number of features that characterize all of these special programs, though they may not all be present in each one. These include:

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[3] Morrison, E. J. "General Vocational Skills and the Secondary Curriculum." In Quirk, Cathleen, and Sheehan, Carol (Eds.) *Research in Vocational and Technical Education.* Center for Studies in Vocational and Technical Education, The University of Wisconsin, 1967, pp. 57–82.

[4] Ibid., p. 69.

[5] Benham, L. G., "The Need for Developing a New Kind of Vocational Program," and Pace, Mary P., "A Description of the Hudson, Ohio Pilot Program in Vocational Education." In Scarbough, D. C., and Rogers, D. H. (Eds.) *Seminar on Planning, Developmental, and Related Programs in Occupational Education,* Center for Occupational Education, North Carolina State University at Raleigh, 1966, pp. 5–26.

[6] Ibid., p. 8.

[7] Ibid., p. 17.

(1) They are nontraditional, that is, they do not fit into any of the usual areas of vocational education.

(2) They are interdisciplinary. The vocational area is used as a core content around which offerings in other nonvocational or related, subjects are based. The teachers frequently plan and coordinate the content of their courses.

(3) They provide means, other than verbal, for self-expression and the opportunity for personal accomplishment.

(4) The primary function of the teacher is not to "teach" the student but rather to provide the conditions under which learning takes place. This puts greater emphasis on teacher planning and individualized learning and less emphasis on traditional "teaching."

(5) The course content is made relevant to the student's everyday life.

(6) The teaching of specific skills for a particular occupation is often not an end in itself. The interest of the student in a particular occupation is a means, or vehicle, by which other traits, such as good work habits, the ability to follow instructions, to accept supervision, etc., are learned.

(7) There is a stress on flexibility both in the content of the program and in the options open to the student. The option can be either further training, either formal or on-the-job, or immediate employment.

(8) Opportunities for the students to explore the nature of various occupations and knowledge of their requirements are provided.

These features yield the type of curriculum that is needed. It is one where the best features of vocational education are used to give the student general education. This proposed curriculum is not designed for a separate elite or for those students excluded from other courses. Rather than a separate body of knowledge to be taught, it is a way of making the educational experience relevant.

Related Issues in Vocational Education

Meeting Labor Market Needs.—The evidence presented earlier indicated that, in most cases, vocational educators have not been able to design programs that match the labor market patterns in their local communities. This is not due to the incompetence of the educators. A variety of influences acts to prevent such a match. First, it is very difficult for employers to predict labor market needs at a local level. The data necessary for statistical extrapolation are usually not available to the local educator. Changes, such as the departure or arrival of a major employer or a technological innovation, cannot be foreseen.

A second factor that makes it difficult to match offerings with needs is the perversity of people. Programs may be established for occupational areas of high need but students may not select these programs. The disparity between enrollment and employment in distributive education is an example. And, it will be recalled that the organization and operation of this program receive superior evaluations.

A third factor is the lack of stability in the career plans of young people. The typical tenth grade student does not know what type of occupation he wants to follow. He has at best an orientation either toward work or college. If his orientation is toward college, he follows the college preparatory track which prepares him to enter any college for which he has the ability to gain acceptance. The youngster with an orientation toward work is not so fortunate. He must select from a limited number of offerings which presumably have been established "to meet local labor market needs." In many cases he selects the program which is least unappealing. This is part of the reason why more than 50 per cent of the male vocational graduates fail to obtain employment in jobs related to their training.

A fourth factor is the relatively high degree of geographic mobility of students. It is not unreasonable to assume that many students will seek jobs immediately or eventually in geographic areas away from their homes.

These factors combine to make attempts to match program enrollments and employment patterns at the local level a virtually impossible or unnecessary task. A more feasible approach is to broaden the training programs so that young people are prepared to enter a variety of occupations.

The Comprehensive versus the Separate Vocational-Technical School.—There is clear evidence that many vocational students who attended comprehensive schools felt like second-class citizens. They thought that other students and teachers "looked-down on" them because they took vocational courses. These attitudes were almost absent among those students who attended separate vocational-technical schools.

This finding has many implications for the present expansion of vocational education in many states in the form of area vocational schools. In this type of school, the students attend the area schools for a half-day, or some other period of time, and spend the other half of their time in their "home" or "sending" schools.

There are two main reasons for this type of arrangement. The first is the efficiency of having students from a number of different schools use the equipment that is located in one school. The savings in capital investment that this arrangement makes possible are obvious. The second is the wider variety of programs that can be offered. Drawing on students from several high schools allows an area school to schedule programs that are not practical for any single school to offer.

These are valid arguments as vocational education is now organized, but it stresses the wrong elements. First, it overlooks the effects of the part-time arrangement on the student. This arrangement is the one which is most likely to make the student feel like an "outsider" in his home school. In the home school the student will take the courses in which he has the least interest and ability. The time spent in these courses will be for the most part boring to him because the student will see little personal relevance. Since such academic subjects have little appeal, the student often does poorly in them. The student is thus put in a position in his home school which minimizes his opportunities for success and recognition in the classroom. Such a situation is quite conducive to a feeling of being "looked-down on." If the educators attempt to counteract such tendencies by limiting admission to the area school to an elite group, they will exclude the students who need occupational training the most.

The second mistaken emphasis is the stress on equipment and specialized skills. The type of vocational education being recommended would have less stress on equipment and skills. Training the student to operate a particular piece of machinery would be left to the employer. The training provided by the school would give the student an understanding of mechanical principles, would enable him to follow an instruction manual, and would train him to use measuring instruments. These skills have broader application than training in the use of specific machines.

The third mistaken emphasis is the offering of a wide variety of programs. Fewer but broader programs are needed. Many area vocational schools are boasting that 30 or more skills will be taught. This is a commendable number but still falls far short of the number of vocational skills represented in a labor market of any size. Any number of specific offerings will always fall far short of employer needs. What is needed is less specific training and more general training—general in the best sense of being an integral part of the education of the student.

Less numerous programs would also have the advantage of facilitating exploration by students. It is obviously impractical for a student to explore 30 or more different programs, but it is possible to become acquainted with a limited number, each of which leads to a group of related occupations.

The Role of Counseling and Guidance.—Far too many schools seem to give token recognition to guidance. Although it is difficult to determine the effectiveness of guidance, it does have the potential of being one of the most important influence to which a young person is exposed. This is because of its unique nature. The ideal guidance relationship takes place in a setting in which the emphasis is entirely on helping the student to become what he, personally, wants to become.

As the regression analysis showed, most of the identifiable factors that influence the choice of a high school curriculum are beyond the control of the student. They include such things as sex, IQ, and father's occupation. Social science has known for some time that the best predictor of the occupation a male will enter is the occupation of his father. Though our country strives to offer equal opportunity to everyone, the evidence indicates there is considerable inter-generation transfer of occupational, educational and economic status.

Guidance counselors have the specific responsibility to attempt to break such inter-generation transfer. Guidance counselors should conceive of their role as assisting personal development. They should attempt to do this by providing a setting in which the individual explores his own interests and abilities with a concerned adult who does not attempt to influence the youngster towards what he, the adult, thinks is best. The counselor may well be the only adult who ever takes this role with a young person. Most other adults—parents, teachers, youth leaders—are advocates of particular interests. Parents want children to have what they never had; teachers want to develop the minds of students; youth leaders stress the goals of their own organizations. A counselor wants the student to accept himself and his circumstances in life in a realistic manner, and to make plans which are based on these realities.

This model of guidance does not appear to be operating in the schools included in our studies. The contact that the students had with counselors was generally considered helpful, but such contact was limited. The counselors' main functions seemed to be assigning students to various tracks and assisting seniors who seek acceptance into college. Little guidance along the lines suggested above was offered.

The reoriented style of vocational education which is being advocated would include the guidance function as an essential element. The stress is on broad occupational groupings so that a young person can explore the nature of various jobs. The opportunities for such exploration in the labor market have been increasingly restricted by legislation and by technological changes which have made it difficult for young people to obtain meaningful employment.

Together with the opportunity for exploration, the school should provide courses on the nature of occupations. These courses should use the study of the interrelationships in society as the organizing variables. Basic concepts in economics and sociology should be taught together with the role requirements of a variety of occupations. Thus, the course would be closely related to what is now taught as social studies but would have greater relevance to the lives of the students.

Much more contact will be necessary between counselors and the students if true counseling relationships are to develop. While student-counselor ratios should be made more realistic, it is doubtful if enough counselors can be trained for several more years to lower the ratio. Counselors, therefore, must rely more heavily on group counseling and must have more clerical assistance. Current developments in the application of computers to the guidance process might free some of the counselor's time. The audio-visual media and instant access provided by a computer may provide an additional bonus in that they may be more suited to the learning styles of the students to whom the suggested form of vocational education is directed.

The Role of Vocational Education in Training Girls and Negroes.—In a previous section the basic difference in the nature of vocational education for girls and boys was discussed. It was noted that vocational education for girls is essentially the office occupations programs. In the cities studied, office occupations account for most of the enrollment of girls in vocational program.

The success of the office occupations programs, in terms of all the usual criteria, tends to obscure the limitations imposed on the girl who expects to enter the labor force. She is told, in effect, that she can either prepare to be an office worker or receive no vocational preparation. The schools in offering such limited preparation are reflecting what society considers acceptable occupations for young girls. The girls, who are the product of this society, accept with little or no question what is offered. The real loser is society for the talents of many young girls are wasted in clerical jobs.

In a similar manner the cultural limitations on acceptable occupations for Negroes impoverish both the individuals who are restricted and the society which wastes their talents. There is evidence, from the Negroes who were available to be interviewed, that they had benefited from their training to approximately the same degree as white graduates. Negroes were, however, underrepresented in the sample. This led to the inference that Negroes are either being hired by the less progressive employers or they are not being hired at all.

This evidence confirms what can be found in any set of unemployment or income statistics. And these figures in turn reflect centuries of social and economic discrimination towards the Negro. When discrimination continues for so many years, it affects the self-concepts of those involved. Many Negro youths are unwilling to prepare themselves for occupations where Negroes are not typically hired. Those that are willing to do so occasionally find their choices blocked by school officials who warm them of the problems involved, or by restrictive practices of unions and employers.

A new style of vocational education, discussed above, should tend to remove these limitations. It should widen the types of occupations deemed acceptable to girls and Negroes. The selection of a vocational program would not involve a commitment to a specific occupational area. Instead, it would afford the students the opportunity to explore a number of areas and to find out if the skills required and the work involved are compatible with their interests and abilities. This exploration, coupled with improved counseling and guidance, should serve to overcome the cultural stereotypes of what constitute acceptable jobs.

Recommendations

On the basis of these findings and conclusions certain specific recommendations are made below. The rationale for each has been presented in this statement. These recommendations point to the direction that vocational education should follow. These recommendations are made with the realization that, if they are to be implemented, fundamental changes will be necessary in the nature of vocational education. These changes are necessary, however, if the special features of vocational education are to be directed to serve those students that it has the potential of serving.

(1) Vocational education should be reoriented towards training in broad, generalized skills which can be applied in a variety of occupations.

(2) The reoriented form of vocational education should be expanded to include the large proportion of students who see little personal relevance in either the traditional vocational or the academic curriculum.

(3) The main emphasis of a redirected vocational education should be on using its special features to bring meaning and interest to the learning experience.

(4) In its redirected form vocational education would provide opportunities for occupational exploration and familiarization which should be an inherent part of the curriculum.

(5) Vocational guidance should be expanded in a number of directions. It should begin in the elementary school to prepare youngsters for their experiences in the redirected form of vocational education. In the junior and senior high school, courses in the nature of occupations should supplement vocational courses. To free more of the counselor's time for student contact, greater reliance should be placed on group counseling, technological innovations, and clerical assistance.

(6) Secondary schools should not attempt to match their offerings to local labor market needs. The emphasis instead should be on broad training that can be used in a variety of occupations in many labor market areas.

(7) Although the current emphasis on area vocational-technical schools would appear to be misdirected, many states are apparently committed to their development. In light of his commitment, policies should be established that attempt to make the students who attend these schools feel fully accepted in their home schools and greater efforts should be made toward the development of new, broader programs in which the vocational programs are carefully coordinated with the academic programs of the "sending" schools.

To accomplish these objectives requires, first, an acceptance by the communities and their educational leaders of the importance of providing broader occupational training for youth who do not go on to college. Although community acceptance of this goal is not easy to achieve, this should be a challege to the educational administrator.

Second, it is essential that school boards, at the state and local levels, re-examine the use of resources in the school systems to determine whether, or not these resources are being employed in the most efficient manner in relation to the needs and interests of the students. This might result in a re-allocation of funds for academic to occupational training.

Third, a re-examination of teacher training, in general, and the training of teachers of vocational education and industrial arts, in particular, would appear to be in order. To what extent do these programs for teacher training provide the basis for an understanding of the large group of students to whom schools today are not relevant? To what extent are these teacher training programs providing the basis for the curriculum development along the lines being recommended in this report?

In general, it is being recommended that communities, school boards, educational administrators, and schools of education reorient themselves toward a curriculum which is realistic and relevant in terms of the needs and interests of students rather than the needs and interests of parents and educators.

Mr. KAUFMAN. I had originally planned to do as you have suggested and highlight what I consider to be the key issues in the statement rather than read the statement as a whole. I want to say that I welcome this opportunity to discuss with you some of the issues involving vocational education.

I might simply indicate that during the past 4 years I, along with a few others who have been associated with me, have been very much concerned with the whole question of vocational education—not so much with vocational education with a capital V and a capital E, but really the training of youngsters, the education of youngsters, so that they can be appropriately educated for a world of work. It is on the basis of many of these studies which we have conducted, and are conducting at present, that I will try to indicate some broad conclusions about the whole role of vocational education.

I will skip the introduction in which I set forth some reasons as to why I am entitled to hold such opinions, since I am not a vocational educator. I am actually a professor of economics at Penn State University which is very much interested in the whole question of youth and its whole role basically in our society.

Mr. **Scheuer**. I think we would all agree for the record that vocational education is too important to be left to the vocational educators.

Mr. **Kaufman**. Right.

Mr. **Scheuer**. That is one of the reasons we are happy to have you here.

Mr. **Kaufman**. Thank you. Let me then briefly indicate six key points that I would like to stress without necessarily referring to the statement at all.

One of the things by which I think we can make some contribution toward the problem of the youngsters in school is to try to look at it, not from the point of view of whether they are vocational, or academic, or college preparatory, and so forth, but look at it from the point of view of four groups of students, as we see them. I am going to use some broad percentages to indicate the importance of each group and fundamentally these are nothing more than rough national approximations.

At one end of the spectrum we have a group known as the disadvantaged youngsters, and for the country as a whole we might think of them as representing about 10 percent of the youngsters in our schools.

Obviously in certain areas the percentage is significantly higher but from a national point of view it represents about 10 percent, and the key characteristic of this group of disadvantaged youngsters is that they do come from family backgrounds which are nonverbal and they really enter the school system with severe handicaps. Then, on top of that, they find that what the schools in general have to offer them are just not meaningful or relevant to their needs.

There is a second group of students that we can think of at the other end of the spectrum—I am not saying which is the highest and lowest, just at the other end—the group of youngsters who eventually go on to college. They represent about 35 percent of school enrollment and probably half of those really eventually do graduate from college. These are the youngsters who typically do enroll in a college preparatory curriculum and survive it, as I like to say. That is, good, bad, or indifferent they have the family background, the motivation, the initiative, the values that we profess we have in our society, and they survive and go on. They discover that the kind of education they got in the high school is similar to the kind of education they get at the university; namely, a straightforward lecture system in the classical style.

Then there is another group—let's put them in between—who typically enroll in vocational education in its traditional sense, and they probably represent about 10 percent of the population.

I know some people misunderstand this number and think that there are a lot more. I am really excluding from that percentage a large number of young girls who might take a few courses in office occupations, typing, and stenography, and I don't consider this in the traditional sense of vocational education, or they may take some courses in general home economics, but if you want to look at it solely from the male point of view, the boys, then this percentage is about 10 percent because very few males go into office occupations. Very few of them go into general home economics.

So I think, if my arithmetic is correct, I have accounted for about 55 percent of the youngsters nationally who go to school—the disadvantaged, the college prep, and the vocational students who take the typical vocational courses.

In between is a large group of youngsters who we estimate represent about 40 to 45 percent of the school population—it might even be higher—who are not disadvantaged. They come from a good family background.

There are no splits in their family lives. Their parents probably own a car. The kind of illustration I like to use is it might be the son of a steelworker out of the Pittsburgh area. The income might be $7,000, $8,000 a year, nonverbal environment, but the youngster has picked up some notions that if you work hard you might get ahead, and he may have some desire to do so.

But when he hits the school system he finds, to use a phrase that was not coined particularly by me, that the educational experience he obtains is not relevant to his needs, his interests, his aspirations. It is meaningless to him. Yet a lot of these youngsters may survive this system.

As a friend of mine points out, they may enter into a nonaggression pact with the teacher, saying, "If we don't bother you, you don't bother us and let us graduate and get our diplomas." But the educational experience is not relevant to what they have observed in life. It is meaningless.

Now, it is this group of youngsters that either may eventually turn out to be dropouts, or if they do graduate, are going to go into the world of work, but there is nothing for them in the school system. They are not good enough for the traditional vocational education which does attract some competent youngsters who have initiative and drive to learn a skill.

The result is they are left out of this whole educational system, as I view it, and my feeling is that this is the group toward which we must concentrate.

Now, I don't like to be misunderstood on this point. I am not saying that we shouldn't do anything for other groups. What I am suggesting, as an economist, is that we do have limited educational resources, in the sense that they are not unlimited, and since they are limited you have to set up a system of priorities, and the question then arises which should get the highest priority.

This doesn't mean that something that might come second or third on the list isn't important, but it may not necessarily have the highest priority, and this makes for what I consider to be tough decisions that have to be made.

Now, it is to this particular group, and I frequently have been misunderstood by some people in vocational education, that I feel vocational educators could make a great contribution if they would direct their attention.

Vocational educators tend, it seems to me, in general to direct their attention to those youngsters who have some initiative and motivation to acquire a skill and go out and get a skilled job. But they do not direct their attention to some new types of programs which, on the one hand, could prepare youngsters for the world of work and, in addition, give them a relevant education so that when they are finished with high school they still have what I consider to be the most significant part of our educational system—options.

I have always argued that the most important thing in a democratic society is that you have options to move in any direction you want, that if you make a decision you haven't burned the bridge behind you. This is what I like to see these youngsters have. If they want to go into the world of work they have picked up something during their high school career which qualifies them for the world of work. They have some knowledge of shopwork, the discipline of a shop, and at the same time have taken coursework in science, and social studies, and mathematics, and English, but courses which are relevant and integrated with the shopwork.

I am not interested in the kind of an educational system that says in the morning you take the academic subjects and in the afternoon you take the shop subjects. The students see no relevance between Beowulf in the morning and what they are doing in the shop in the afternoon. I would strongly suggest that there have been enough experimental programs to demonstrate that instruction can be interrelated. Now not overnight, but there are many places where this has been tried and apparently they seem to have some success. When one demands success for these programs, the assumption is made that these new programs shouldn't be tried because the others are successful.

My argument has been the other isn't working; let's try something else. So I have been urging vocational educators that they should take this know-how that they have about shopwork which is related to the the style of these youngsters, not necessarily the disadvantaged, but it is a physical style of learning where they have a way of teaching which is individualized.

Vocational educators understand their individual differences, that youngsters learn at different bases. This is something the college prep teachers just don't understand. The vocational educators say, "Why should we assume the burden for this group? Why don't the others do it?" The others won't. Vocational educators have the key to bringing relevance to the education of these youngsters.

Too frequently, it seems to me, and this is what I want to stress in my statement, vocational educators look at skill training as an end. You train an auto mechanic; you train a welder; you train a draftsman. I have no objection to using this kind of skill training—but not as an end. It is a means by which you teach a lot of the other things. It is the means around which you could teach the English, and the math, and the social studies, but, after all, the most important thing in development of these youngsters is an attitude toward work, a self-discipline toward work. Use his interests in some of these skills as a means by which you could hold him and interest him in school.

So I get personally rather disturbed at times that everyone talks about, "But we have to train them for a skill." I like to say let's educate these youngsters in such a way that they have a good foundation which will permit them if they graduate to go on to college if they want to, go into the world of work if they want to; they have the right attitudes, and interests, and so forth.

Now, it seems to me—and I would rather be brief because I would rather discuss some questions with you gentlemen—that we are asking the wrong questions in the field of vocational education. I have always felt, particularly in the work that I do in the area of research, that 90 percent of research is to ask the right questions. I have just listed, it seems to me, a few of the questions that have been asked which I think are not relevant.

For example, you hear a good deal of discussion about should we have a separate vocational education school or should we have a comprehensive school. You could debate this endlessly, but the trouble with it is that people are talking about form and not substance.

By that I mean you could have a comprehensive school which presumably includes vocational education and college preparatory education, and I would say in that one building you have separateness.

There is a difference between a comprehensive education and a comprehensive school. I would even argue that you could have youngsters in vocational education and college preparatory, English, both in the same classroom and they are separate because the teacher knows one is vocational, the other is college prep and she separates them, and so the notion of integration is a very artificial one.

The analogy I use is the formal integration of a school in a sense of whites and Negroes. I am personally convinced that this is not truly integration unless the administrators, and the schoolteachers, and other officials in the school truly follow a spirit of integration and not the form of it.

The form is meaningless.

So I am not concerned so much with whether it is a comprehensive school or a vocational school. The real issue is to provide an education that is relevant to the needs of youngsters so they can maintain options, and as long as one fights the comprehensive-separate question it seems to me one is discussing the wrong issue.

Another issue that frequently comes up, and I must admit as a labor economist I am going against my own trade and profession, we frequently hear, "Shouldn't we train youngsters to meet the needs of industry?"

Well, first, I am not personally convinced that the real touchstone is the needs of industry. I think we ought to have education that meets the needs of the youngsters, and, if we meet their needs, they will come out properly trained with the right attitudes so that industry will want them.

The other thing I would say is that I don't think as economists we can project the needs of industry into the future. Oh, we know that the direction is going to be in service occupations, let's say, as against factory occupations, but we can't precisely pinpoint. We know, for example, there is going to be a strong need for manpower in health occupations, but we can't pinpoint specific numbers.

So what I am suggesting is we should keep in mind these broad areas which I think we can predict, but we can't predict the specific number of the people that are needed in specific occupations.

In addition, I would say that we live in such a dynamic society with such changing technology and we know these youngsters over their lifetimes will adjust to new occupations, that the more important thing would be to give them the kind of training and knowledge that will permit some degree of adaptability.

Now, when they are finished with high school I am perfectly satisfied to argue that if they now want to move into a specific narrow skilled occupation we should have institutions around to meet those specific needs. We could arbitrarily say at the age of 18, "OK. You finally must make a commitment."

You can't maintain possible options all of your life. But still we ought to have institutions even at the age of 35. If someone would like to shift he ought to be able to find an opportunity to do that.

Another issue I frequently hear about which disturbs me no end is the question of whether or not the funds for vocational education or any other education should be handled by the Federal Government or the State government. Again I think the formulation is not in terms of the interest of the youngsters. I personally have found a greater feeling toward innovation, creativity, change, at the Federal level.

If I were personally satisfied that in the various States we find the same degree of innovation and creativity, and imagination, and willing to adjust and change, then it is of no consequence to me. It would seem to me that the real question regarding the way these funds are handled should not be in terms of the State or the Federal Government, but rather in whose hands will we obtain the most effective use of the funds in terms of the objectives we would like to achieve in the youngsters. This it seems to me must be the primary question.

In my visits to many schools around the country, in talking to a lot of people, the thing that disturbs me most about educators in general is they never start the discussion with what are the needs of the youngsters. There is always talk about the building, the equipment, the teachers, but never the youngsters.

I am not suggesting that these others are not important considerations, but I would like to see these groups discuss the broad issue in terms of youngsters and assume that the institutions in our society would change to adjust to their needs rather than follow the principle that we followed all of these years that here we have a set of institutions, and youngsters must fit into them and if they don't fit then they are going to be discards in our society.

I think it is time for us to reexamine many of the institutions in our society, not only our educational system, though this is not before this committee. We have been doing some work in employment service. Is that institution which was set up in the 1930's really meeting the needs of the 1960's?

A good deal of vocational education still goes back to the 1917 legislation. We are still tied to that. We have a Federal Reserve System that was set up in 1914. It is still tied to a lot of these old forms of institutions. We still have universities that won't adapt to the changes of the day.

But it seems to me the crucial question is one of adjusting our educational institutions to meet the needs, the aspirations, and interests of youngsters. This is the primary question. Thank you.

Mr. PUCINSKI (presiding). Mr. Kaufman, I think that your studies should be of tremendous interest to this committee. I am not sure that I draw the same conclusions that you draw from the same material.

I am in agreement with you that vocational education needs a great deal of updating, but I read into your findings a most serious indictment against the methods used by educators to downgrade vocational education.

You say, for instance, on page 10 of your statement that when you talked to youngsters that you interviewed many of them felt "looked down on" because they were taking vocational education.

This is no reason why we should eliminate vocational education. Obviously we have failed to give it the status that it deserves in our society. You say on page 9:

> The most damaging indictment of vocational education is the disparity between the number of young people who enter the labor market and the number who receive vocational preparation. In the cities studied, approximately one-third of the high school graduates enter college. The other two-thirds enter the labor market or take some form of non-baccalaureate training. Yet only 30 percent of the tenth to 12th grade enrollment—both male and female—received vocational preparation. If office occupations are excluded, the entrollment figure falls off to seven percent.

What is the conclusion that you draw from this?

Mr. KAUFMAN. Well, my suggestion——

Mr. PUCINSKI. First, what conclusion do we draw from this? What conclusion do we draw from the fact that two-thirds of the youngsters entering the labor market took some form of nonbaccalaureate training and yet only 30 percent of the 10th- to 12th-grade enrollment, both male and female, received vocational education.

What we are saying here is that of the two-thirds that went into jobs, only one-third actually had vocational training and the others got their jobs pretty much by a hit-and-miss method, seek and succeed, or whatever you want to call it.

What is the significance of this finding in your judgment?

Mr. KAUFMAN. One I see is that if we added up all the money we spend on education we have what I would call a complete misallocation of resources. We devote most of our resources for the training of youngsters on giving them courses designed for them to go into college, and yet we find most of them do not go into college, and this is really an inversion of how we ought to be spending our money.

But what I am trying to suggest is, recognizing that youngsters feel looked down upon if they go into vocational education, second-class citizens, recognizing that parents of these youngsters themselves feel that the youngsters are getting, rightly or wrongly—I am not saying correctly—that they are getting an inferior education, if we developed a method of education that was not called college preparatory and was not called vocational but consisted of education which included for all youngsters forms of occupational preparation as well as these other academic subjects which would be interrelated one to another, then we no longer would have distinctions.

I would also suggest that the kind of education that is being tried in some of these places is such that if a youngster felt he would like to devote more time to occupational preparation and, say, less time to the other, this option is available to him.

A rigid, inflexible curriculum is not set forth for the student. The opportunity is given to him to choose how he would like to spend his time. So the kind of education I am trying to suggest would eliminate these class distinctions, first- or second-class education, but would still provide for the occupational preparation of a lot of youngsters if they want it, without the so-called stigma that it is a second-class education.

I am trying to meld together all of these issues.

Mr. **Pucinski.** I certainly could agree with you that we ought to be training young people in work habits and attitudes along with specific skills, but I read from this statement of yours that, while two-thirds of the young people get jobs, only one-third had the vocational training.

I read into that the fact that the educators just are not in tune with the needs of their communities. There is a reason why that one-third didn't get vocational training and the reason is that obviously the educators have made no significant effort to find out what are the needs of the students they are training, as you say, with courses that have no relationship to the future activity of the young people. This is the kind of academic pedagogy that continues to make our school system in many instances a dismal failure, and I don't see any appreciable change in attitude among the educators. They still continue to look down upon any suggestion that maybe the time has come to realize that we are now spending billions of dollars on manpower training programs and various other activities.

President Johnson and I want to spend $2 billion to reach the 500,000 so-called hard core unemployed, and we are going to have to try as adults to train these people and teach them things that they should have been receiving while they were exposed to the compulsory education process of secondary education in this country. So I agree with you. But, as I say, to me the significance of this paragraph is that the educators in a great many instances are totally out of tune with the needs of the community.

Mr. **Kaufman.** I would agree with you and I think the reason is that the professional educator, the administrator-superintendent, is responding to the articulate minority of a given community and the inarticulate majority cannot influence the school board or the school people. I frequently have argued that if people in education feel they want professional status then they must act as professionals and represent the interests of the inarticulate.

I feel very strongly about this because when speaking to school superintendents at the local level they sometimes say, "Well, what you suggest is well and good, but if I responded to the needs of the inarticulate," and a majority possibly in the community, "I might not be able to hold on to my job."

I am sure there have been lots of superintendents who have lost their particular job, but this is a lack of professionalism in my judgment.

That is, the professional superintendent must represent the best interests of the majority of the youngsters in his community.

Mr. Pucinski. I agree with you. Of course you state also that there has to be a close wedding with basic education.

Certainly you want to teach the youngster the basics that he needs to go through life with and then orient him into the skills. That is the whole purpose of this hearing—to come up with suggestions, possible solutions.

As I said yesterday, bond issues are taking a beating all over this country, and they are, in community after community. Voters are rejecting efforts by the educational community to raise additional funds for their needs, and this of course is a tragedy, but I don't think that this represents any sort of an antieducational attitude on the part of the voters. I think that what it represents is a manifestation of the disgust that most voters have with the present quality of education that the youngsters are getting, and I think the educators have failed to convince the paying public that more school buildings and more facilities are going to necessarily do the job.

I think that they have failed in the classroom and I think this is the result.

It is my hope that this vocational education bill will produce some new dimensions and new directions for communities to be able to take on this problem and perhaps establish a better rapport between themselves and the paying public.

I say this: That the crisis in American education is going to continue and it is going to get much worse than it is today if these educators don't get their heads out of the clouds and start facing up to the fact that Mr. Taxpayer wants his money's worth and he doesn't think he is getting his money's worth.

Mr. Kaufman. I think one of the unfortunate things really is the title of the legislation, the law we are talking about, Vocational Education Act of 1963, because vocational education still has in the minds of people a certain narrow concept. Though the preamble of the legislation seems to talk in broad terms, there are some sections in the law which define vocational education in narrow terms, and my impression is that there are some vocational educators who do not see the law as being the basis for trying this broader occupational training.

Mr. Pucinski. We would be very happy to receive from you, sir, any suggested language that you would like to offer that we can include in this bill to give it the broad sort of meaning. Mr. Hawkins?

Mr. Hawkins. Professor Kaufman, in the example you gave of the group of students, you indicated that the system set a priority on, I think you said, the fourth group.

Is this because this offers the greatest hope? Just where is the emphasis now being placed? Is it spread over the other three groups? Just where is the emphasis now being placed with respect to the four groups that you gave us?

Mr. Kaufman. It seems to me the major emphasis, unfortunately, representing in general community interests and the articulation of the minority in a community, is the college preparatory emphasis, and this other group has no spokesman for it and yet represents in my judgment the largest group.

I have another thesis with respect to the term "use of resources" in a school community. We frequently talk about education as defined to provide equal opportunity to all.

Now, frequently this means that each youngster is entitled to the same expenditure for him, but if many youngsters enter the school system unequal because of a family environment, if you treat inequality with equality, you are going to get unequals.

I was quite impressed that the New York Times about a week ago reported that the superintendent of schools in Detroit, Dr. Drachler, had instituted a suit in the courts arguing that he was entitled to more money in areas where he is dealing with the disadvantaged. His grounds are that if the law says everyone should get equal educational opportunity, then the disadvantaged area should get more money than the advantaged area so that they have an opportunity to be equal. I think this is a fascinating approach that Dr. Drachler has to this particular problem.

Again the economist in me says that if we have limited resources we should put the money where it will produce the objective that we are trying to achieve. If the objective is equal opportunity, then our resources must be put more heavily in those areas where the youngsters come into our school system heavily unequal.

Mr. **Hawkins.** Are you emphasizing then putting more money into the group that you referred to as the disadvantaged youngsters?

Mr. **Kaufman.** No. I am not ignoring that group, but I am emphasizing that we ought to put a lot more money into the group to whom education is not relevant. They are not disadvantaged, but they find no relationship between what goes on in school and what they heard our society presumably provides for them.

This is that large 45-percent group.

Mr. **Hawkins.** I don't seem to square that with the statement that you made with respect to providing equality of opportunity and putting more money into that particular field or with that group because of their disadvantages and the statement that you make that we should put it where the money seems to bring the quickest or the most effective results. I assume that would be to put the money where the initiative or the drive is. I don't quite see how that would provide help for the disadvantaged who lack initiative and drive but who can with some compensatory program obtain that initiative and drive that should be helped.

Mr. **Kaufman.** I misunderstood you and you are correct, Congressman. The highest priority should be to the disadvantaged but the stress I was trying to make is they do not represent the large majority of the youngsters.

Mr. **Hawkins.** It is a matter of quantity, not quality.

Mr. **Kaufman.** Precisely. This is the emphasis I would give and I would say the priority should be first in terms of the disadvantaged, and next the group to whom education is not relevant. The next group might be the narrow traditional vocational education, and last should be the college preparatory youngster.

In this way I am talking against myself in terms of my own youngsters, but I feel they should be at the lower end of the priority since we have limited resources. Frequently the response of educators is "But what are we going to do about the training of the elite, the ones who are going to bring about change in our society, new ideas, and so forth?"

Well, this is a legitimate goal, but then let's agree that our educational system has a different objective, namely, the training of the elite. My objection is that on the one hand we say we are training and educating for equal opportunity, but then allocate our resources to the training of the elite, so we have our cake and eat it at the same time.

Mr. **Hawkins**. The other question I would like to ask you concerns the statement you made about the Federal versus State Government controversy and how this controversy overlooks the interests of the youngster.

I quite agree with you, but it wasn't clear to me just what this means, whether it means greater Federal interest or less, or whether it means providing more local control over the Federal funds that are being appropriated.

Just what does it mean? I quite agree with your conclusion, but I don't see what we can do about it or what you are recommending that we should do about this so-called controversy that goes on and everybody talks about it, but no one seems to come up with an answer that seems to satisfy everyone.

Mr. **Kaufman**. I am not personally convinced—that doesn't mean I am right—that, if you turned a lot of money over to local school systems and State departments of education, this money would be used for what I call innovation.

I am concerned that it might simply mean more money available to replicate what is going on already. I don't know how—I am not a lawyer or anything—but I would like to see something in the law. I know that the Elementary and Secondary Education Act does have some provisions that the moneys can only be spent for innovative and creative programs and it also provides for evaluation of these programs at the end of a period of time.

I am personally not convinced that this approach has been successful, namely, simply to write this control in the legislation. Because there is tendency to say this is creative, this is different, but it really might be the same thing. I am more interested in how do we get new approaches toward education rather than who controls the funds.

Mr. **Hawkins**. Are you suggesting a flexibility in the law rather than having it tied down specifically to, let's say, a Federal-directed program or one which rests with the local institutions?

You seem to suggest that what we are now doing is perhaps the best approach which provides some flexibility.

Mr. **Kaufman**. It might well be. That is right. I am just concerned with the general trend that we ought to turn more and more money over to the States and the localities rather than have some element of Federal "control" on the assumption that the local level is where we get the innovation and the creativity.

I don't think this assumption is necessarily correct. My observation is that there seems to be more creativity and innovativeness among people of the Federal level than I see at some State and some local levels, and I want to be sure the money isn't spent simply to expand the way in which we have been doing things in the past.

Mr. HAWKINS. Thank you very much.

Mr. PUCINSKI. Mr. Scherle.

Mr. SCHERLE. Mr. Kaufman, as a stanch and longtime advocate of vocational education your testimony in particular aspects interests me very much. Early in your testimony you talked about the integration of vocational students and those being trained academically. I have always been under the impression that the primary reason for vocational training programs was basically because the students involved were not necessarily interested in academic processes to the extent where they were going to perhaps enter college at a later date.

Mr. KAUFMAN. Well, I would like to ask the question, Congressman, Why aren't these students interested in social studies, science, and mathematics, and English? My answer is that they find it has no relationship to life as they see it, but I would suggest that there have been programs in which they can see a relationship between these academic subjects and there is no reason why they should be deprived of them.

Mr. SCHERLE. Well, let's pursue this just a little further. If the student in a classroom cannot comprehend and is disinterested, if he does not feel that he is intellectually sound enough to compete, won't he then lose interest in the academic and perhaps find his position as a person more qualified, let's say, to become a blue-collar worker and consequently more interested in vocational education?

Mr. KAUFMAN. But, you see, I would hope, and the suggestion that I am making in very general terms is that, if he is working in a shop and working at a given problem, he may discover that as he is working on this problem he has to know some scientific principle and he has a reason then for learning something about science and he may then be in a position to turn to a physics teacher or chemistry teacher to help him solve a problem in which he is interested.

Now, there is a relevance between what he is learning in science and what he is doing in the shop; similarly with mathematics.

Mr. SCHERLE. Let me ask you this question, Why in some areas of education do the various students select either academic or vocational courses? Why is their decision to make a decision perhaps in a field, being sophomores or juniors, why do they choose one over the other?

Mr. KAUFMAN. I assume that there is parental pressure to go on to college which is very, very strong. There is also the pressure of what I would call, which we do know of, their peers, what their friends are doing, and my concern is to avoid this decisionmaking process at this stage.

There is no reason why a youngster at the ninth or 10th grade should make a decision "I want to go vocational" or "go academic." Why couldn't he handle both in a sense of getting the academic?

But it must be relevant to what he is doing in the shop.

Mr. SCHERLE. All right. Let me pursue that a little further. Why do we have dropouts today? Why don't students finish their schooling? The reasoning you gave a moment ago was that it results from peers and parental pressure. Further in your testimony you said that these students should be trained to their needs rather than society's needs.

Well, now, aren't you being a little contradictory in regard to what allowance you want to give the student to make the decision and the pressures that are put upon them by someone else?

Mr. KAUFMAN. If my suggestion is followed—and I am not necessarily saying it is the only way or even the right way—you no longer present to the parent the distinction. The youngster is getting education, has an occupational base, has an academic base, but they are all interrelated into one.

All his fellow students are doing the very same thing so that these pressures are removed from him.

Mr. SCHERLE. Well, no, they aren't. They grow in my estimation because as the student proceeds through high school years he may not be academically inclined or have the ability or intelligence to compete with other members of his class.

This is the reason that they have maybe 1-B and 1-A, and so forth for the slow learners. He may find that he can't keep up and he may also find that his mission in life is not necessarily in the field of academics as much as it is in the pursuits of skill training.

Mr. KAUFMAN. And that is why if the educational program will allow some options, if he wants to spend a little more time in shop and less in the academic subject he can, but it is still education.

The beauty of vocational education is—and this is why I think the vocational educators have a key—if you visit a vocational education school you see that even in the narrow skills the teacher recognizes individual differences.

Usually the students don't sit in a classroom and have the teacher lecture at them. They work on different things. There are different developments and in this sense the vocational educators have, I feel, a real opportunity to do something. They could translate their method and get the academic teacher interested in this and as a group work together.

Mr. SCHERLE. Don't you think this is being done now?

Mr. KAUFMAN. In a few places it is being tried.

Mr. SCHERLE. At every school that I have visited I have seen this happen time and time again with the student who was failing rather than have him drop out. I think primarily this is one reason for vocational training, not only because we need vocationally skilled people, but also to try and provide a place for those who will not further themselves academically to the extent that they want to go to college. In many areas when a student is in the process of taking his vocational training, he also realizes the need for additional information or academics to enable him to be a more skilled person in his chosen field.

Mr. KAUFMAN. I feel though, if we had the educational program that I am suggesting to be considered, that youngsters will see relevance in what they are doing and this would tend to minimize dropouts.

In fact, I would go so far as to say that the type of education I am suggesting might even start in the first grade. Youngsters do have a feel for working with their hands and moving around and being individuals.

Youngsters are curious, creative. They have initiative. They want to learn. "Just give us the tools to learn." Then they move into a classroom in the first grade and they all sit in the same classroom, rigid. They must not talk, but a normal child's behavior is to do a lot of talking. They want to move around and they want to use their hands. I would suggest that many sociologists and psychologists say that our system is just anti the psychology of learning that these youngsters should have. If they started back in the first grade with this kind of, call it occupational understanding, we would find when they hit the high school that large groups of youngsters who find they must make these choices won't have to because they see relevance to their education.

Mr. SCHERLE. Professor Kaufman, in the State of Iowa when I was a member of the legislature, we set up for the first time 20 area trade schools. The primary reason for us doing so was because we recognized the fact that all students are not prepared for further pursuit of their education in institutions of higher learning.

We also noticed since we have implemented this in our State that many, many youngsters who I am sure would have been dropouts before their graduation have now moved into the field of vocational education. I think to a certain extent we have saved them. I think this is a great program, and feel that if they would have been forced to continue school in the field of basic academics rather than gain the ability to be skilled workers we would have lost them.

Now another subject you brought here in regard to allowing the students to decide how they should be trained or innovated. There is an old adage that you can't let the inmates run the institution. I think until society demands that changes be made in our world today that the educators must be in a position to train these children in the areas the educators themselves think most appropriate.

Mr. KAUFMAN. I am not asserting that we allow the youngster to decide what subjects ought to be taught. What I am suggesting is that large segments of our educational system do not develop a curriculum based on an understanding of the needs of the youngsters or on the psychology of learning. I am perfectly willing to let the professionals make these kinds of decisions.

Mr. SCHERLE. This is true, but if you are going to train them in a particular field, whether it is academic theory or vocational, you are training them for the future, for a job, and as long as society demands at this stage of the game that they be trained in skills which are in demand in our society, you can't allow them to decide what their training will be without regard to society's needs.

Mr. KAUFMAN. Well, I respect your opinion and judgment on this matter, but I view the essence of a democratic system as being a device that meets the needs of the people and the youngsters themselves. I feel that over the long run if we meet these needs the psychological needs and so forth, that in time we could adapt and have a much better society.

Mr. SCHERLE. In other words, you are saying that society should adapt to their wishes rather than train them for our present society.

Mr. KAUFMAN. Exactly, because, after all, society is the composition of all these youngsters of the future and they should have a right to decide what they want.

Mr. SCHERLE. This is true, but how can the children decide for the future by having teachers train them when no one is certain of their position or what society will demand of them after they are through this phase of training?

Mr. KAUFMAN. I think we must accept at a minimum that we do live in a certain type of society, whether some people like it or not, that operates on certain middle-class values. Namely, if you work hard, you will get ahead; if you sacrifice today, you will have rewards sometime in the future. These are the symbols that I think we want to inculcate in these individuals. These individuals are told this by their parents, but when they go to school, they see no relevance between what they are being taught and what their parents and others have told them.

Mr. **Scherle.** Yes, but with society's demands in this realm of activity it would be foolhardy for them to go into a field that is not in demand at the time.

Second, what specific qualities or characteristics do you see in this young generation now that you think would be of advantage to society in the next few years?

Mr. **Kaufman.** At the risk of being mildly misunderstood, I distinctly see in society today some of the failures of us to recognize the needs of new generations and the directions in which these youngsters turn when we impose on future generations a set of values that may be inconsistent with their needs and aspirations, and so forth. But I don't see really any inconsistency between what you are suggesting and what I am trying to suggest. I think we are in agreement that we want to do what is best for these youngsters. I am simply suggesting that we have enough information today to have an understanding of the disadvantaged, and these other youngsters to whom education is not relevant, and we ought to have the know-how to build the curriculum that relates to this.

I say today we have many curriculums that are unrelated to a lot of these youngsters.

Now, I don't know the specific figures in the State of Iowa and I am quite sure these vocational schools are successful, these area vocational schools, but I would be willing to bet there is still a large proportion of youngsters who cannot get into the vocational school because of certain requirements.

I don't know whether it is in Iowa, but I do know in general many youngsters cannot get into a vocational school. They don't have the aptitudes and ability. They can't handle a college prep, and I am simply suggesting that vocational educators take a look at your know-how and expand the operation a little bit to provide a kind of curriculum that is close to the needs of this one group that I am emphasizing.

Mr. **Pucinski.** Mr. Hathaway.

Mr. **Hathaway.** Thank you, Mr. Chairman. Mr. Kaufman, I want to thank you immensely for your statement. It is the most refreshing presentation I have been privileged to hear in a long time before this committee. I say that probably because I agree with your views 100 percent, but let me just bring up a few points.

You mentioned there was no spokesman for this type of curriculum in the community. But aren't the businessmen in communities, the ones who are operating factories and so forth, very much interested in getting employees who have the skills that they need and aren't they spokesmen in the community for this type of curriculum? If they aren't, why do you think they are not?

Mr. **Kaufman.** Well, I don't think so. We have found, and I think other studies have found, that in many areas in this country there is very little relationship between the vocational educators and industry in given communities.

I know on the basis of some of our interviews with employers they didn't even know the meaning of vocational education. In one of our questionnaires we asked them at first "What do you think of vocational education." We heard all kinds of criticisms.

And then we asked the second question: "What do you understand by vocational education?"

And their understanding of vocational education was the time when they were in junior high school and they made an ashtray. They don't even understand it. I know a study has been made by Sam Burt of industry advisory committees and he found that these exist in many places only in form, very little substance.

It may be true in some communities they are very active, but as a generalization there is a limited relationship between industry and the schools. But it raises an interesting question.

In some communities I am sure there are employers who look to a vocational school to provide them with welders, or auto mechanics, or draftsmen. They will hire them when they graduate, but these are employers interested in narrow skills.

I don't know to what extent they articulate for this other group. I happen to be very sensitive to this kind of a problem. I would say that large groups in our society feel that the institutions in their communities don't understand their needs.

This is true of many institutions. We find, for example, public assistance agencies presumably are nonresponsive to the needs of the very people who need welfare. I am not being critical, just presenting a fact. It may well be a university is not responsive to the needs of students. It may be the employment service is a formidable place for a person to enter. It may well be that the mother or father I am talking about is fearful of going into a school and talking to the principal or superintendent.

I can. I am aggressive enough to do it. I could articulate, but these other parents may not feel they are even properly dressed. I would say our institutions in the communities have separated themselves away from the majority. This is why there have been attempts made in the form, in the Department of Labor outreach programs for example, of going out to the people. The people are not going to come to you.

It is this kind of a thing where I think the school systems have not been responsive to the inarticulate.

Mr. HATHAWAY. And probably because the articulate don't bother to do anything about it. I mean, for example, Parent Teachers Associations. I know it is mostly the women who go and they probably aren't familiar with the husband's business and his needs for vocational training.

Mr. KAUFMAN. Or the articulate people like myself who come from a university town, and there are a lot of articulate people there. Their main interest is, can we teach French in the first grade, and my reaction is, which has made me be a bit of an outcast in the community, I don't consider French in the first grade the highest priority for spending money.

If you want to teach French you could send them to a private school and give them private lessons.

There are other groups who need help first. But those who want French are the people who come to the meetings. They are the people who talk to the superintendent. So obviously their needs are going to be met. They are the active voters in the community.

I have challenged superintendents that they must represent the inarticulate. I admit this is troublesome and I read in the papers of superintendents being fired for trying to do this.

Mr. **Hathaway**. I gather from your answer to Congressman Scherle that you would start this program quite young. First grade you mentioned.

Mr. **Kaufman**. There is an experiment being carried on now in New Jersey, interestingly enough, outside of the Trenton area where they are actually having what they call a pretechnology program that starts in the first grade. This is an experiment being financed by the Ford Foundation. It starts with the notion that youngsters can work with their hands.

They have little printing plants and through this process a youngster may learn something about a printing machine, they learn to read, they will learn to write, they may even find it necessary to learn something about social studies, and so forth. It is all related to some problem-solving or shop operation.

This is the thing that makes learning of these things relevant to their needs. When they enter the junior high school, senior high school, they now see relevance to the academic subjects so they are meaningful. They don't look at the sharp distinction between vocational education and the others. They see they are all necessary for their own personal development.

Mr. **Hathaway**. Would you incorporate on-the-job training at some stage through the pre-high-school career?

Mr. **Kaufman**. You mean during the high school this work experience program and so forth?

Mr. **Hathaway**. Right.

Mr. **Kaufman**. Yes, I would do that in my judgment but I may be wrong. I think it is a successful program in the absence of alternatives. What I would like to see is that kind of work experience operate within the school system. Why must they leave the school to go find relevance? Why doesn't the school provide it for them in the first place?

Mr. **Hathaway**. Isn't what you say applicable just as much probably to all four groups, at least to group 2 as well as it is to group 4? Although you think that those in group 2 are college-oriented and school is a meaningful experience, it really isn't a meaningful experience except to get a diploma to go on to college, which in turn is a meaningful experience only to get a diploma to maybe get a good-paying job, say, as an insurance salesman or get into a graduate school, law, medicine, or something, and get something meaningful. The individual would be better off if school was a meaningful experience from kindergarten on up regardless of whether he went into a vocation or went on to college.

Mr. **Kaufman**. My response is, my youngest son, who is a senior in high school, is going on to college next year. This is the education I would like him to have as well because I know that he found no relevance in his education but he could survive it and go on to college. But I would like to see this for all.

Mr. **Hathaway.** So shouldn't this vocational group also have that as one of its options?

Mr. **Kaufman.** Agreed.

Mr. **Hathaway.** So that we won't pass up anybody who matures later in life and he finds out when he is a senior in high school that he really wants to go into college.

Mr. **Kaufman.** Yes.

Mr. **Hathaway.** Thank you, Mr. Chairman. Thank you.

Mr. **Hawkins** (presiding). Mr. Dellenback.

Mr. **Dellenback.** Thank you, Mr. Chairman.

Your recommendations, Professor Kaufman, that begin on page 21 intrigue me because in part they appear specific and yet I am not sure really what you are suggesting.

On your first point, for example, that vocational educaton should be reoriented toward training in broad, generalized skills, what skills are you speaking of here? You are not talking about welding and how to gap a motor?

Mr. **Kaufman.** No; I think I am talking about familiarity with equipment, safety, how to get along with a foreman, how to get along with others. These may be attitudes, but also some ability to work with tools and so forth.

That is the sense of what I mean by "broad, generalized skills." Also, the meaning might be that instead of a specific narrow skill there has been some discussion recently about developing education for occupational clusters so that if you get some training in a broad area you could apply it to thosuands of potential occupations. This is what I am talking about.

It may be certain categories such as graphic arts, something very broad. In the process of learning something about graphic arts you pick up a lot of other information. Or it might be something like metalworking, learning to work with metals. The way I would envision this is that we have these broad groupings and if youngsters are working on something, if they feel they have some need to go into a graphic arts shop they can go there, if they want to go into the metalworking shop they can go there, and in this way they will pick up these broad, generalized skills which give them some opportunity of handling equipment and working with equipment.

Mr. **Dellenback.** Doesn't a good vocational education institute do exactly that now, even though perhaps not with the emphasis that you want. For example—the next witness is going to be talking against the background of having been a very successful principal of an exceptional school in the city of Portland. They don't just teach students such a narrow skill that they don't have broad capacities they can apply beyond that narrow skill.

They deal with fundamental principles that go back to the broad reach of physics and then they take the principles of physics and they apply them in the broad as well as in the narrow. I am not quite sure, beyond your statements, which sound good and which I think are good, that there is much of a difference between what you are talking about now in theory and what would exist in practice. I am not sure that the difference doesn't arise really out of the mediocrity of those who are doing the training rather than the mediocrity of the course intended for them to teach in training.

Can you comment on this?

Mr. KAUFMAN. In some of the schools that I visited you will see electrical equipment shop and the youngster will have selected electrical equipment and he will spend 2 or 3 years only in that shop in that specific area of electrical equipment.

Mr. DELLENBACK. Isn't he learning broad skills through that medium? Just as you stated, in effect, in your written testimony and also in some of the things you have said, you see these skills as not ends, but as means to the end of training youngsters. So can't it also, whether it be metalwork, or electrical work, or some other narrow skill, be merely the medium by which they learn the broad general principles?

Mr. KAUFMAN. I would agree with you if the shop teacher in this area accepts the theory that he is not really concerned so much with turning out a narrow specialist, but uses electrical equipment as a means for maintaining the interest of the youngster.

Mr. DELLENBACK. So really you are back to the quality of the instructor.

Mr. KAUFMAN. That is correct, and a way of looking at it. The second point I would make, however, is that very frequently these vocational schools which concentrate, as you indicate, in this narrow skill in which possibly you might train some youngster for some of these other attributes, involve heavy investment of funds. The question that I would raise is, Is there an alternative way for developing the same generalized skills without this heavy investment of funds so that for the same amount of money we could achieve the same objective?

This is the economist in me always talking. Sometimes you could achieve the same objective with less money and then you have more money left over to do a lot of other things.

Mr. DELLENBACK. I think you are being extremely practical and I am with you completely all the way because whether we are talking on a State level or a National level there is a very definite bottom to the purse. There aren't going to be enough dollars to achieve everything that one would want.

You must constantly go to the priority that you touched on early in your testimony, and it is paramount that we use the dollars where they will achieve the greatest results. I am with you all the way on that.

Mr. KAUFMAN. The reason I am so challenging today, and I am speaking with an authority that I really don't think I have, is that I only have one interest. I would like to open up a discussion with vocational educators in a calm and unemotional way and have them agree to the exploration of some of the recommendations that I have been trying to make and it may be through this type of discussion something can be evolved.

What I am disturbed about is that many, not all, and I think our next witness is not in the category I am describing, are still bound by the traditional view of vocational education. They feel it is successful. They feel they have been doing a good job in a narrow area. Their position is: Why should we take on the responsibility for this other group of youngsters? They will not carry on a dialog on this issue. I would hope that out of this dialog would come a resolution of varying points of view. It is for this reason that I tend to sharpen my position more in order to invite this kind of dialog.

Mr. DELLENBACK. Well, you really lead into what I intended to ask as my next question. What do you find about the attitude among leaders in vocational education on these very points to which you have been addressing yourself?

Mr. KAUFMAN. Well, I haven't spoken to many leaders. I have met a few. Like college professors, they vary all across the spectrum, and I understand why they act this way. Vocational educators for many years had very little support, financial and otherwise. They, finally in 1963, were successful in obtaining the passage of a law which was designed toward vocational education, and the feeling is we finally have an opportunity to demonstrate that we can do something with vocational education in this traditional sense and suddenly a group of people like Mr. Kaufman from the outside come in and start raising all kinds of questions. They feel, give us a chance, see what we can do, and so forth.

My only response to that is that 1968 is different even from 1963. We didn't have the situations in 1963 as we have today. I mean things are dramatically changed, and, if we are going to do something in these urban areas, particularly be concerned with disadvantaged youngsters, and those youngsters I am trying to be a spokesman for, those who find education not relevant, then vocational educators, like all educators, must reexamine what they have been doing and ask themselves the question of whether what we thought was the right thing to do in 1963 is the right thing to do in 1968. This is what I am trying to suggest that they do.

I find that they in general, like any other group, my own included, feel it is very difficult to be criticized or have suggestions made of change, and so forth, and my sole task is to try to open up this kind of a dialog and agree that we all have a common interest.

I would like to get the academic teachers and academic people in on this to talk about youngsters and what the knowledge each group has can do a better job for the youngsters and not simply the maintenance of something that we have had in the past.

Mr. HAWKINS. Mr. Dellenback, the time is getting rather late and I am sure that you would want to hear the next witness and I am wondering whether or not, unless you have a specific question——

Mr. DELLENBACK. There are probably 2 hours' worth of questions I would like to ask. If I may ask just one more question, Mr. Chairman.

Mr. HAWKINS. Certainly.

Mr. DELLENBACK. Because this, after all, is the heart of what we are here for. What is it that you think should be done on the national legislative level in connection with this proposed bill which we are now having hearings on to help achieve the best leap forward in this area?

Mr. KAUFMAN. I think I indicated this before to Congressman Pucinski when I indicated that I would like to see this bill take on a broader perspective in terms not of vocational education—maybe the name of the law itself ought to be changed—and take on some broad concepts of using occupational training as a core around which you could educate youngsters.

I just feel that the youngsters I have been talking about have no legislation now. The vocational education student has his Vocational Education Act of 1963. The college prep youngster has a bit of the Elementary and Secondary Education Act. No one seems to be concentrating on this large group of youngsters to whom education is not relevant and I would like to see vocational educators accept the challenge of using their know-how for the aid and assistance of these particular youngsters.

Mr. DELLENBACK. I wish there were more time to go into it because I am not sure that I really read most of your testimony as talking in terms of merely adding something to that which is. I really thought you were talking in terms of a redirection of that which was, and now you say you think we ought to be doing something for these other youngsters who are not reached by vocational education or academic training.

I thought you were really suggesting a reorientation or redirection even within those groups.

Mr. KAUFMAN. Well, the reorientation of vocational education would be in the direction of encompassing this larger group. Instead of concentrating on the 10 or 15 percent, start concentrating on this group that might add up to 50 or 60 percent.

Mr. DELLENBACK. Thank you, Professor. I wish there were more time. Thank you, Mr. Chairman.

Mr. HAWKINS. Professor Kaufman, we would like to thank you for the contribution you have made. It has been a very refreshing point of view.

Mr. KAUFMAN. Thank you.

Mr. HAWKINS. Our next and final witness today is Dr. Leon Minear, superintendent of the Oregon State Department of Education, Salem, Oreg.

Dr. Minear, we welcome you here. Mr. Dellenback.

Mr. DELLENBACK. Thank you, Mr. Chairman. It is a very real pleasure for me, on behalf of the Education Committee and as an individual, to welcome Dr. Minear here this morning. I have known Dr. Minear for a number of years now through my years of service in our Oregon State Legislature.

I know him as a gentleman who did an exceptionally fine job in the field of vocational education when he himself was a teacher and a principal, who was selected by the Governor of Oregon to move from that to the superintendency of the Oregon State Department of Education, who since that time has stood on his own feet as a candidate for public office and been elected by the citizens of our State, and as their leader in this field, as our leader in this field, I know him as a highly competent, dedicated man and I am delighted to see him here this morning.

Mr. MINEAR. Thank you, Mr. Dellenback.

Mr. HAWKINS. Thank you. Dr. Minear, the Chair would like to suggest that you either file your statement and have it entered into the record in its entirety or else read the statement or merely present the highlights.

STATEMENT OF DR. LEON MINEAR, SUPERINTENDENT, OREGON STATE DEPARTMENT OF EDUCATION

Mr. Minear. Thank you, Mr. Chairman. May I say I am delighted with this opportunity to be with you and I appreciate the kind words of Congressman Dellenback.

I have been, as he indicated, a principal of a vocational technical high school. I have also been superintendent of training for Pan American World Airways. Currently I am State superintendent of public instruction in Oregon.

Mr. Chairman, I have presented to the committee staff, and I assume to you, two documents. One is a two-page brief and the other is a 30-page brief. I noticed that you were looking at the two-page brief. I would start with that one and summarize very briefly.

Mr. Hawkins. Without objection, both briefs will be entered into the record at this point.

(The information referred to follows:)

Statement by Leon P. Minear, Superintendent of Public Instruction, Oregon

Mister Chairman and members of the General Subcommittee on Education, I am most gratified to have the opportunity to appear before you and express some of our concerns in developing the kind of occupational education program needed to meet today's challenges.

The Vocational Education Act of 1963 has had a tremendous impact on vocational education in Oregon. It has made it possible to provide quality vocational education to many more youth and adults. More importantly, it has contributed to a greatly increased awareness of the extensive need for vocational programs and has stimulated the development of comprehensive plans that bring within reach for our State the major objectives of the Act.

Unfortunately, there are many difficulties which are seriously retarding our efforts to implement these concepts and plans. I would like to cite a few of these problems and then to suggest some actions which would help to overcome them.

The confirming of the availability of the federal funds too late to permit firm planning of programs by the local institutions and agencies and the limiting of the use of the funds to the fiscal year in which they are allocated. Confirmation of the 1968 funds was received in July 1967, after local budgets were confirmed, personnel were contracted for and classes were scheduled. Workstudy funds for 1968 have not as yet been made available. The uncertainty of the federal funding is a particular problem in planning the construction of facilities.

The multiplicity of agencies and organizations receiving special funds for vocational education and training programs and the lack of effective coordination of these programs result in the dissipation of much of the total effort. Duplication of activities, the overlooking of needed programs, and failure to concentrate all available resources in a unified effort are all too frequent.

The requirement of matching federal funds by specific purposes limits the flexibility of use of the funds, particularly in areas where local and state funds have not normally been heavily used, such as programs for persons with special needs. This problem will become more acute in all areas as the amount of federal funds is increased.

The complexity of financial and statistical record keeping and reporting currently required and the frequent changing of types of data to be reported place excessive demands upon the state and local professional personnel to the detriment of educational programs.

The funding of a high percentage of the cost of such programs as OEO and MDTA in comparison to the 50 per cent level of vocational programs causes local boards to use such programs instead of the regular school vocational programs and thereby limit the enrollment to special categories of persons. The added benefits associated with some of these projects promote dropout of students from regular, and more suitable, programs to get into the special programs.

There is a serious shortage of qualified professional personnel at both the state level and the local level. Many key positions go unfilled or must be filled by persons with minimal qualifications.

The present level of funding under the Vocational Act does not permit implementing well-developed plans at the rate necessary to have a real impact on the unfilled needs nor does it permit the development of pilot programs to work out the application of much that we now know about providing realistic vocational education.

It would appear that many of the difficulties we are experiencing in achieving the full objectives of the Vocational Act could be effectively overcome or at least eased by appropriate action at the federal level. I believe that among the more important steps that should be taken are the following:

Raising the level of federal funding to permit a massive attack on the extensive needs for vocational education at all levels.

Provide for appropriation and verification of the availability of federal funds at least three months prior to the fiscal period in which the funds must be expended.

Move toward the unification and coordination of the various federal programs dealing with vocational education and training and manpower deveolpment and provide for more uniform fund matching requirements.

Provide for decreasing regulation of the use of the federal vocational funds, including elimination of the several specific matching purposes and the simplification of the financial and statistical reporting.

Stimulate the development of vocational education leadership personnel through increased federally sponsored programs made readily available to the personnel of state and local agencies and through more adequate funding of teacher education programs.

Focus the major efforts on "prevention" of dropouts and inadequately educated youth through regular vocational education programs suited to their needs rather than on remedial programs.

There is much yet to be done in establishing vocational education in its proper place in the mainstream of education, but we are convinced that continued effective cooperation at federal, state and local levels can and will insure the sound and rapid development that is so urgently needed.

DECEMBER 5, 1967.

MEMORANDUM

To: Participants in the Hilton Head meeting.
From: Wendell H. Pierce.
Subject: Report of the Ad Hoc Committee on Vocational-Technical Education.

The attached document is a draft of the final report of the Education Commission of the States' Ad Hoc Committee on Vocational-Technical Education. This draft provides a brief statement of beliefs which we hold concerning vocational-technical education and an equally brief statement on what we have observed in America with regard to this important part of education.

Long-range goals, emerging needs in the field, activities of agencies organized to work in the vocational-technical area, and some alternative ways in getting the job done are presented.

We fully recognize that variations between and among states make it unlikely, and perhaps undesirable, for *all* states to follow *all* parts of this report to the letter. However, it is our feeling that this report represents a vitally important first step in the improvement of vocational-technical education in the states and that, as such, it will be of value to those people who are interested in this segment of their state's education effort.

[Attachment]

FOREWORD

The Education Commission of the States chose vocational-technical education as a critical area for study and recommendation because of the importance of work life to each individual. In a free, productive society, work and preparation for work are honorable and closely related to each person's human dignity for which our nation has utmost respect.

Occupational education, however, must be considered simultaneously with education in the other major areas of human concern—social, cultural, political, and intellectual. The efficiency and effectiveness of educational programs in all these areas are affected directly by the context within which they are carried on. Thus the Task Force on Vocational-Technical Education, while recognizing the great strides forward in occupational education in recent years, determined that if massive improvement is to be made in education in occupational and other areas, the context in which education takes place must be changed. The Task Force report, in my view, is a thoughtful work and provides the rationale for contextual change, a sound theoretical framework, and alternative organizational means for accomplishing stated objectives.

The Task Force report is commended to each of the fifty states for consideration for action.

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Chairman, Steering Committee,
Education Commission of the States.

Changing the Contexts in Which Occupational Education Takes Place—A Report by the Task Force on Vocational-Technical Education to the Education Commission of the States, With Proposals for Consideration by Each of the Fifty States

I

PART I. WE BELIEVE—

1. Public education exists for all the people. Public schools have become a vital link to progress and indeed the very existence of our democratic society.

2. The achievements of America's public schools over the past hundred years have developed potential for creativity in our society that have brought us to the threshold of a new era in which the possibilities for greatness will be limitless.

3. In this last half of the 20th Century, educated people, and the technology they have fostered, have given this nation a margin of choice which must be used wisely if a society of free men is to endure.

4. The schools are responsible for educting and preparing individuals for full participation in the economic life of American society; thus, the schools have a major responsibility in the field of manpower development.

PART II. WE OBSERVE—

1. "Education for *all*" has become a reality; but the formal classroom setting which does not motivate nor serve all the people is still the primary environment for public education. The community, with all its resources, must also be involved as a context in which learning takes place.

2. Generally, education for work life is not treated equally nor simultaneously with education in the intellectual, cultural, social, and poitical areas of human endeavor.

3. A plethora of educational programs, often poorly related to each other or to "real life," points up the need for strong state leadership in master planning and coordination. The resources unique to each state must be mobilized to provide each individual sufficient numbers and kinds of learning experiences to prepare him to meet society's ever-changing demands.

PART III. WE PROPOSE—[1]

1. That a *Human Resources Council* be established in each state.

The membership would consist of heads of those departments of state government that each state deemed appropriate, plus key lay citizens. The Chief State School Officer may serve as Executive Secretary.

The Council's responsibility would be to develop long-range goals (this might be referred to as a "Bill of Educational Rights and Public Responsibilities") with a view toward adding the community context for education to the present "school" context and relating the two.

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[1] Please see Appendix A for details of the proposals described briefly on this and the following pages.

The following principles may guide the Council as it leads in setting the States' educational goals:

A. *Priority.*—Education should be given first priority in the allocation of human and material resources.

B. *Community Involvement.*—Educational should be extended outward from the school to the entire community. Citizens can be involved as advisors on policy and programs, as tutors in and out of "schools," as resource persons, and as students themselves.

C. *Extension of School Day and School Year.*—Schools, as resource centers for learning for students of all ages, should operate from 8 a.m., to midnight every week of the year.

D. *Flexible Termination, Reentry, and Advancment.*—The formal school-leaving age should be made flexible so that the individual, as he reaches the maturity to either go on to college or a job, may do so with the assurance that pursuit of a liberal education can continue along with career development, throughout life. Both dropouts and graduates whose skills become obsolete could be welcomed back into this kind of system to take up where they once left off, without fear of new failure.

E. *Individualization of Instruction.*—No limitations or inhibitions should be placed summarily on learning because of age, ability, or other factors—rather, learning experiences should be planned to meet the needs of the individual.

F. *Followup and Feedback.*—Effectiveness of educational programs should be continuously evaluated through a followup of all students for an indefinite period and securing feedback on how well the programs are serving their consumers. Such information can be used for program redevelopment and improvement as well as for continual escalation of individual skills.

The Council would establish and coordinate the work of state-level commissions which would concentrate upon bringing contextual reform to education in each of the following areas: occupational, social, cultural, political, and intellectual—beginning with occupational.

2. That an *Occupational Education Commission* be established in each state, with counterparts in Local Community Advisory Councils.[1]

The Commission would be a top-level group, broadly representative, including members from labor and management in the private sector, as well as from public service. The State Vocational Education Director may serve as Executive Secretary. The Commission would have a full-time professional and clerical staff.

The Commission's responsibility would be to provide leadership and stimulate development of vocational-technical education programs designed to achieve the goals defined in cooperation with the Human Resources Council, with attention to such factors as existing vocational-technical programs in the state upon which improved programs can be built.

Size and ecological characteristics of the communities in the state—metropolitan, urban-rural, and rural.

Identification of individual dropouts and potential dropouts as well as unemployed and underemployed adults. With this group, specific training and job entry is of key importance. *This should be the target population* for initial efforts in contextual reform; then the identified "passive" youngsters, and ultimately *all* the youngsters and adults who can benefit.

Through its counterparts, the Local Community Advisory Councils on Vocational-Technical Education, the Commission would cooperate with local and intermediate school districts and lay citizens to—

Survey human resources—state, institutional, group, and individual.

Identify, establish, and staff "learning stations"—[2] in order to induct youth and adults into programs including, but not limited to, "school."

Develop exploratory and tryout experiences, extend the school day and year, provide for flexible termination and reentry, identify and prepare lay instructors, and develop new curricula.

Provide, in cooperation with business, industry, and other agencies, for followup and placement of students.

3. That a *Manpower Coordinating Committee* be established in each state.

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[1] Each state now has a Vocational Education Advisory Council established under Public Law 88–210. The Occupational Education Commission could be the same body, or a reconstituted body, and be asked to assume the responsibilities set forth in this section of the report.

[2] Described in detail in Appendix A, pp. 1 and 2.

The composition of the Committee should provide for high-level representation of labor and management, and of the appropriate state agencies.

The Committee's responsibility would be to effect maximum system-cost effectiveness in the utilization of the various occupational and job training programs.

The Committee's primary function should be coordinative rather than administrative, with the actual implementation of the education and training programs being the responsibility of the appropriate agency.

A state may elect to have this Committee operate as a subcommittee of the Occupational Education Commission, or separately, with close working relationships with the Commission.

4. That each state consider the establishment of a *Task Force for Occupational Education and Economic Development.*

This Task Force would draw specialists from appropriate existing state agencies (including the Department or Division of Economic Development), labor, management, and the new groups proposed above.

The responsibility of the Task Force would be to help build up the state's industrial output through new or expanded industries. This would be done by means of providing information to assist industries in considering the state as a site, providing a pool of trained workers, and/or making available undeveloped (or underdeveloped) workers who can be trained for jobs provided by new industries.

A state may want to consider this kind of special occupational education service if it seems likely that through its use the income of the state could be substantially increased. The Task Force could operate as a subcommittee of the Occupational Education Commission, or separately.

5. That *Regional Learning Centers* be established in each state in Intermediate Education District or County School Offices or other regional educational organizations in the state.

The Centers would be staffed with student-personnel specialists who would work with sociologists, psychologists, economists, and cultural and political leaders to synthesize educational planning for the region. The Local Community Advisory Councils described in Proposal No. 2 above would work closely with the Centers.

The responsibility of the Centers would be to provide leadership in development of broad, interdisciplinary curricula that are responsive to the needs of society and the individual and geared to the resources of the region.

The results of this planning would be used by counselors in diagnosis and prognosis for individual learners, and by master teachers in planning complementary educational experiences in specific fields.

APPENDIX A

THE PROPOSALS IN DETAIL

1. The Human Resources Council—Guidelines for Development of Long-range Goals

As proposed in this report, the responsibility for development of long-range goals with a view toward adding the community context for education to the present "school" context, and relating the two, rests with the Human Resources Council in each state. As there are unique needs, resources, and structures within each state, the goals the Council determines will necessarily vary from one state to another. The following goals and procedures are suggested by the Task Force preparing this report, however, as being worthy of consideration by Human Resources Councils. The Task Force recommends that—

A. The State Education Establishment assume a leadership role in soliciting the cooperative efforts of higher education, local and intermediate education agencies, Research and Development Centers, and Regional Laboratories to build upon successful innovative projects under way in school districts in each state throughout the United States over the past several years.

B. Education be extended outward from the school to the entire community, and upward from 12 years to a lifetime, by supplementing educational programs with "learning stations" in the community in every area of human endeavor. Thus, education could be pursued in two contexts: learning through formal, planned instruction and reflective exploration in school; and exploration and some skill development through practical experience out of school. This will require departures from the Carnegie unit of credit and the traditional 12-year diploma program in order to establish flexible advancement procedures that will enable every person to move between "education" and "life," learning at his own rate.

C. The province of learning stations be active exploration of the world through practical experience and through meaningful job experiences in the processes of self-government, the fine arts, education, and recreational activities, as well as through job experiences in business and industry.

1. Learning stations need not be alike in purpose, source of support, or duration. We now have such stations for apprentices, in diversified occupations courses, in distributive education, and in other fields. This concept needs vast expansion and is a current goal of our Federal Government.
2. Learning stations could expand post-high school, continuing and adult education programs so that they reach into every corner of the state.
3. They could be operated whenever and wherever they are needed, from 8 o'clock in the morning until midnight, every day of the week, every week in the year.
4. Many could be staffed, equipped, evaluated, and modified *by those who establish them.* This means that "insrtuctors" might often be volunteers and practitioners working with professional educators—architects, engineers, businessmen and women, artists, musicians, sportsmen, mechanics, etc. It is still possible to utilize good minds in our general public for teaching. Teacher certification, as we now think of it, is not essential to *all* teaching and learning.
5. Many could be staffed by school aides, tutors, interns, or student teachers who are part of a teaching team under the direction of a master teacher.
6. They should make it possible for children as well as adults to explore the real world of business and industry, government and politics, cultural achievement, and social and recreational opportunities in our cities, rural areas, forests, and sea coasts.
7. They could be established, when necessary, by cooperative arrangements among several districts in an area, or between rural and city districts.

D. A much wider diversity of educational opportunities be provided for people in all communities, regardless of size, through bringing laymen from all walks of life into educational planning as well as the teaching and learning process.

Local Community Advisory Councils representing each of the broad fields—occupational, social, cultural, political, and intellectual—could be given the task of providing action—or task-oriented educational experiences in "learning stations" in the community or region.

The involvement of large segments of the community in "curriculum" planning and the establishment of learning stations in each of these areas hopefully would assure that the proper emphasis, support, and resources are devoted to providing a great diversity of educational opportunities in each.

E. As learning stations are established in the community, *public schools be transformed into educational center for the entire community, responsible for—*

> Intellectual growth through planned instruction to develop communication and mathematical skills, ability to learn and to think critically, and reflective exploration of social and ethical issues, with major emphasis on the learner and the learning process. The contribution which education could make to the development of intellect and creativity has received far less favor in the public eye than has the contribution which education makes to social mobility. There is now more awareness of need for the kind of education which "unsettles" a man's thinking and which has for its purpose intellectual development and the creation of informed and discerning minds. These are not impractical goals in an age in which civilization may have become a "race between intelligence and annihilation."

Individualized educational planning for all members of the community aimed at the successful placement of each person in the next step of his life cycle.

The outward and upward extension of education should make it possible to find the "subject matter" of education among all the challenges that are the essence of everyday experience for every child and adult—building successful family relationships, keeping physically fit, managing personal finances, finding and holding increasingly challenging and rewarding employment, making friends and establishing a satisfactory intellectual and social life, and participating in the processes of democratic government and social progress. The sum of the ways in which *each individual* understands and copes with these problems will be the substance of any progress toward solution of national or worldwide ills.

Curriculum and learning experiences could be organized in terms of broad areas of human development in which every person is involved with varying degrees of emphasis throughout his lifetime—occupational, social, cultural, political, and intellectual.

The State Department of Education, in cooperation with other state agencies concerned with human resources, should begin to develop criteria for instructional programs based on goals that allow for individual differences.

Individualized instructional programs could become a reality with the existence of—

a wide diversity of educational opportunities in learning stations in the community and school and

educational guidance and planning centers in each school to diagnose learning needs, prescribe learning experiences, and accept responsibility for pacement of every person in the next step of his life cycle, whether that step is a job, career advancement, service in the armed forces, entrance into homemaking and parenthood, or enrollment for advanced educational opportunities.

F. Learning opportunities be expanded and diversified by making fuller use of community planning and resources. It will be wise to begin developing guidelines that define a new teaching hierarchy that clarifies the master teacher's role as that of diagnostician, learning counselor, and supervisor of lay instructors, tutors, aides, and para-professionals.

G. Because the kinds of innovations that are evolving will require some basic changes, not only in the hierarchy of teaching, but in the values, beliefs, and self-image of teachers, colleges and universities, the State Department of Education, and local education agencies should design pre-service and in-service programs which will offer teachers and aspiring teachers strong, continuous, "on-the-job" support as they make the necessary transitions. This implies the modication of present teacher education programs to place universities in direct contact with on-going local school-community operations.

H. A task force consisting of State Department of Education, Higher Education, and local district representatives be established to design teacher education arrangements to—

1. Provide continuous in-service education that will guide and sustain teachers, counselors, administrators, aides, and community planners as they design and effect the necessary restructuring of school programs and organization.
2. Provide pre-service for identification of, and education and supervision for future teachers, student teachers, and interns.
3. Provide career entry and career advancement opportunities for para-professionals.

2. *The Occupational Education Commission*

A. *Immediate and Urgent Needs*

The Occupational Education Commission, with its responsibility for providing leadership and stimulative development of vocational-technical education programs designed to achieve the long-range goals developed in cooperation with the Human Resources Council, will need to establish some short-term and intermediate goals. The material in this section and in Section B, below, "Criteria for Assessing Current Practice," is provided for consideration by the Occupational Education Commission in each state. Urgent needs, as viewed by the Task Force that prepared this report, are:

1. An Occupational Education Program Geared to the Needs of an Automated Age

The average youth entering the labor market today will probably shift occupations some five times during the years he will remain in work life. These job changes will demand changes in occupational competency, which comes through education and training. Youth needs the kind of education that will prepare him for an entry job. He needs education that will prepare him to anticipate change and to adapt to it. Appropriate basic occupational education can provide opportunity to develop transferable knowledge and skills, and a problem-solving approach to the tasks he faces. The educational program will need to have great flexibility. It will need to provide experiences based upon experimentation and observation as well as on the abstractions and principles of traditional academic disciplines.

The traditional division of education into separate disciplines will have to be replaced by new content (including the "learning process" *as* content) that combines essential elements, and requires group teaching effort. The well balanced occupational education of tomorrow will thus provide preemployment education for youth which includes preparation leading to trained versatility, but will also provide continuing education for updating, upgrading, and retraining after they have entered the labor force.

2. Opportunities for Every Person To Obtain Occupational Education Appropriate to His Needs

Each person is an individual, like others in many respects but different in others. The occupational needs of persons are as varied as the many facets of work life. All of them need basic educational skills, understanding of the workings of our society, and the like, but their occupational education is a very personal thing, each one differing from others in ambitions, attitudes, and abilities. The task of meeting these varied needs is thus a difficult one; it belongs to many other agencies in addition to the public schools.

3. Occupational Education Programs Geared Closely With Manpower Needs of the Labor Market

Effective occupational training of preemployment type results in a satisfactory job secured by the individual on completion of his school program. If this is to happen, the school program must be geared to employer needs. It must offer training for occupational fields in which jobs are available. It must provide the kind of worker that the employer will hire. It must regulate the numbers trained to the needs of the labor market. "We have begun to see the need for a planned relationship between manpower needs and educational programs." (Venn) The rapid changes taking place in modern work life demand similar rapid changes in educational programs.

4. Effective Occupational Guidance for All Students

Perhaps the greatest shortcoming of the present overall program of occupational education is the lack of adequate occupational guidance for both youth and adults. Each student in full-time school needs to have available the type of realistic guidance service that can be of help to him in the development of a career plan needed by every student who either drops out of high school or graduates and goes on to further study or to a job. This should include strengthened and expanded placement service of a quality that merits support by all employers. Improved guidance service is especially needed by persons in minority groups. Such guidance service will require drastic upgrading for many present guidance workers who know relatively little about the requirements of modern industry. Vocational orientation programs for counselors is a beginning. The counseling function should be expanded to include assistance from representatives of business, industry, and the academic disciplines. A formal means for this is described in Proposal No. 5 of this report.

5. A proper Balance in Emphasis in High Schools Between Occupational and Academic Education

Some 80 percent of ninth-grade high school students never receive a baccalaureate degree, yet the largest amount of attention with respect to curriculum, enrollments, and facilities in many schools is given over to the needs of the 20 percent who do finish college. This imbalance needs correction. Those who do not finish college are "turned out of an educational system oriented toward someone else's college degree rather than their own work needs." The biggest task facing the American high school today is to make its curriculum meaningful to students. "This meaning must be found in curriculums related to the world of work." (Venn)

6. Decreasing the Numbers of High School Dropouts

"The toughest immediate problem in occupational education is the high school. Something positive must be done about high school dropouts." (MIT Summer Study) There is little use in trying to keep youth in school when curriculums do not meet their needs. The high school program as a whole needs a type of revamping that will introduce curriculum and practices related to the world of work which will attract students who are now potential dropouts, and will provide them with education really suited to their needs.

7. Use of Occupational Education in Decreasing Unemployment and Underemployment

Something is wrong in a situation where thousands of jobs go unfilled and thousands of workers cannot secure jobs. Many of the unemployed could secure jobs if they undertook appropriate training. Many who are on payrolls but underemployed could better their situations by upgrading themselves to better jobs, and thus releasing for others of lesser skill the jobs they now hold. Occupational education of types that will alleviate these conditions need to be expanded and adequately implemented.

8. Development of an Understanding and Appreciation of the Broader Aspects of Work Life by All Students—Academic as Well as Vocational

"Some of the new vocational education should be a part of the educational experience of *all* students and conversely, some of the classical disciplinary type of education should be a part of this experience. Current vocational education should be expanded and generalized so that working with materials, with systems and with processes provides a base for intellectual growth along both traditional academic and vocational paths." (MIT)

9. Placement of Occupational Education in the Mainstream of Education

Man's work life is the most important aspect of his life. Occupational education is a life-long process. It begins in childhood with early impressions of work life. It continues in full-time school with basic information about occupational life, with exploratory experiences, with basic technological understanding and basic skills, and ends with specific preemployment education for entrance into work life. After entering employment the worker continues to need education for updating and upgrading, and for preparing himself for an entirely new job. This life-long education calls for a wide range of program patterns, in different educational settings and on varied educational levels. As an integral part of the common core of all education the only logical place for occupational education in the educational establishment is in the mainstream. Here it must be if it is to attain the place of importance that it must have in an automated age. The responsibility for the development of occupational education in the United States must be shared by both general and vocational educators. It is high time that the general educator realizes this responsibility and assumes his share of it. The unnatural dichotomy between occupational and liberal education must be destroyed through the fusing of both programs into a unified whole.

10. Curriculum Revision in the Elementary and Junior High Schools to Provide Occupational Information and Exploration

Specific occupational education located in the later years of full-time school attendance must be based upon solid foundations of occupational information and exploration. Information about work life must be introduced effectively into the curriculum of the elementary school, followed in the junior high school with more extensive information and with opportunity for exploratory experiences. If wise occupational choices are to be made by youth in later years, there is need for well developed programs of basic understandings. The MIT Summer Study brought out many of these needed curriculum revisions.

11. High School Occupational Education Programs That Will Develop Breadth in Occupational Understanding and Skills

The present day weaknesses of the American high school indicate the need for widespread changes in curriculum objectives and implementation. The time when the youth could complete his full-time occupational schooling in high school is rapidly passing. The labor market today asks for a higher level of preparation for many jobs previously entered with only high school instruction. Although some specific preparation still finds an appropriate place in the high school, the main task of this institution in the years ahead is that of basic preparation for specific training offered in post-high school institutions. The high school over the years has provided such preparation for professional education later obtained in the colleges. It is now faced with the task of adding to the total program suitable curriculums that will provide basic understandings and skills to get students ready for specific instruction in area vocational-technical schools, technical institutes, community college occupational programs, and other post-high school institutions. The basic program for the skilled occupations may well take the form of curriculums designed to provide the skills and understandings underlying clusters of closely related occupations in selected occupational fields. For many students a work-study pattern such as the ones used in distributive education, diversified occupations, Job Corps, and Junior Achievement programs will be an important phase of the total program.

12. Program Patterns for Area Vocational-Technical Schools and Skill Centers

The rapid change in skill requirments in work life, in sophistication as well as in character, has forced much occupational education into post-high school institutions. Stimulated by the availability of federal funds for the construction of facilities and the operation of programs for such institutions, the several states have undertaken extensive programs of construction. The occupational education goals set forth for these area facilities include part-time instruction of high school youth by serving as skill centers for several comprehensive high schools. They also serve as centers for MDTA programs and for adult extension course centers. The future of many of these area schools does not appear to be clear. Experience has shown that some of them started as high school service centers and relatively soon exclude the high school students in favor of adult programs. Others move into community college status. In some states there appears to be little coordination of new development of area vocational-technical schools and other post-high school institutions. It may be that the future pattern will emerge as a community college with which is affiliated a comprehensive skill center serving both junior college students and high school students from neighboring schools, with the adults of the area also served by the program.

13. Widely Expanded Occupational Curriculum Offerings in Community Colleges

The community college is the logical institution in which to locate many types of occupational education curriculum. Those of semi-professional character, those dealing with the education of various types of technicians, and curriculums that prepare workers for certain skilled occupations find the community college a desirable setting. The prestige of the institution, the breadth of general education course offerings, the support offered as a part of higher education, and the like, together with increasing concern for occupational education by community college leaders, make it a logical place in which to expand the overall program of post-secondary occupational education. The recent rapid growth in new community colleges based upon many years of solid development offer an opportunity for assuming a major responsibility for education beyond the high school. Failure to do so may result in the establishment of less desirable types of programs outside the mainstream of education.

14. Technician Education Programs in Technical Institutes

The technical institute with its singleness of purpose and high selectivity meets a special need for the training of engineering technicians in geographic areas with concentrated industrial activity, or as branches of engineering colleges. The numbers are not large but they should continue to play an important part in this phase of occupational education.

15. Enlarged and Improved Apprenticeship Programs

Formal apprenticeship programs have provided many skilled craftsmen in such occupational fields as construction, the metal trades, and the printing crafts. The output falls far below the total manpower needs. Restrictive union practices, unwillingness of employers to bear the training costs, reluctance of youth to enter apprenticeship at lower wages than they could earn on the production line, and other reasons, have kept the output far below its potential. With high school programs providing basic instruction in occupational clusters—thus providing tryout experience as well as basic skills—recruitment for apprenticeship programs might be stimulated and attrition in the programs reduced. Apprenticeship might well be developed within certain other occupational fields from those now served. Some revision in entrance qualifications and program content may well be needed to meet present social and technological needs.

16. Enlarged Programs of Continuation Occupational Education for Adults

This type of occupational education program looms large in the total picture of the needs of present day life, yet it receives less attention in many institutions than the fulltime day program. If the needs of tomorrow are to be met, this situation must be changed. Occupational education for adults must be recognized as a vital need and given proper support. A large share of such education is now provided by agencies outside the educational establishment. Most of these are desirable programs, but they should be supplemented by largely increased offsprings through public education. In all occupational education programs it is essential that the door to advanced study not be closed.

17. Social Programs to Provide Skilled Labor for New or Expanding Industries

The economy of a state is improved by the addition of good basic job-generating industries financed by risk capital. Such industries not only provide jobs within the new plants, but they generate service and other jobs in the area. When such industries consider new plant locations they look into such items as the tax structure, availability of sites, utilities, transportation, public schools, housing, and many others. Of chief importance is the supply of skilled labor, and the facilities for occupational upgrading of workers. Many underdeveloped communities that are now passed up by expanding industries could be favorably considered if a trained labor supply were available. Certain states have recognized this situation and done something about it—South Carolina, for example. The state sets up a special administrative educational unit to work cooperatively with the Department of Economic Development. This unit makes an analysis of the skilled worker needs of the proposed plant, studies the potential supply of trainable persons, and outlines a training program to supply the needed personnel. If the company decides to come to the community, the state educational resources are mobilized, space secured for the training, equipment moved from a central warehouse and installed for temporary service, an instructional staff is assigned, and trainees recruited. Such service, if properly implemented, can add appreciably to the economy of a state.

B. *Criteria for Assessing Current Practice*

In Proposal No. 2 of this report, it was suggested that the Occupational Education Commission give attention to assessing existing vocational-technical education programs in the state in order to understand the baselines with which they are working, and determine next steps. Practices that are current in some states may be next steps for other states, so any listing of criteria for assessing current practice will, of course, be viewed differently in various states. The following items are presented as "checkpoints" for consideration by the Occupational Education Commissions:

1. *Instruction.*—Each state should have a master plan for occupational education at all levels, that looks ahead as far as is practicable with respect to curriculum offerings, adequacy of coverage of the needs of persons and employers, new construction needed, financial outlay required, and the like. The diversity of employment and population found in large cities, small cities, and rural areas calls for varied types and levels of programs.

   a. Continuing curriculum development should be undertaken at all levels—from elementary school through college.

   b. Close articulation should be developed for easy transition for all students from one level to the next and one institution or program to another.

   c. Occupational education offerings in the public schools should be in keeping with projected local employment needs as well as the needs of the population to be served through full-time and continuation programs.

   d. Close working relations should be maintained with employers, with public employment service, and other pertinent agencies.

   e. Curriculum patterns should reflect current and emerging labor market demands for trained versatility by providing for experimental and experiential learning.

   f. The media utilized for occupational instruction should cover a wide range of learning situations that may include programed instruction, tutorial sessions, case discussions, role playing, computer assisted instruction, industrial visit, work experience, etc., required to develop the desired behavior patterns in students.

g. Teacher aides, lay instructors, and tutors should be used, when feasible under the direction of master teachers, toward the end of utilizing most effectively the abilities of the professional.

h. A guidance system should be developed for the entire educational establishment that will provide at all levels the best possible assistance to persons in their choice and pursuit of occupational instruction. This should include a pattern of systematic check-up for full-time students, together with effective placement services when leaving full-time school. The program should include service for working adults. Part of the total program may well be carried out by the public employment service, closely coordinated with the school program.

i. Occupationally oriented education should begin at the age level of the elementary school including information about occupations which will interest students of that age, and continue through the full-time school with exploration at the junior high school level, basic occupational instruction in the senior high school dealing with occupational clusters, and specific occupational instruction at the upper high school level when appropriate, at the community college level, and at the adult level.

j. At the elementary education level, the instruction should take the form of occupational information dissemination using various media such as programmed written materials, films and film strips, television, visits to work places, etc. Provision will need to be made for appropriate teacher education.

In the junior high school the instruction concerning work life should be an integral part of the total curriculum and should include exploratory experiences with in-school industrial arts, business arts, and other broad laboratory patterns reflecting activities of work life, with visits to work situations, and with various media designed to bring to the students an understanding of the requirements and opportunities of occupational groups.

This will require curriculum reorganization and development, changes in industrial arts practices and emphasis, and re-education of instructors. The program in the junior high school should evolve into broad avenues of occupational education in the senior high school.

Far-reaching changes will be needed in the high school, if the educational pattern is to develop into a form that will really meet the life needs of the wide range of students who attend. The heavy academic emphasis will need to be modified to provide for the needs of students who will enter work life at the close of high school (or possibly before), those who will enter organized work education programs of apprenticeship or company training, those who will enter occupational education programs of specific type in area vocational schools or community colleges, and those who will go on to college either directly or via the transfer programs of the community college.

Much of the high school program will take the form of "paths" or "avenues" that provide organized prevocational or basic occupational instruction leading the student to effective entrance into post-high school instruction in the selected field. For example, the path leading to engineering technician training would include pertinent mathematics and science, mandated or selected general education subjects, and possibly mechanical drawing and materials of industry. Paths toward post-high school business education, or semi-professional education in the medical-health field, or other areas would include similar basic and foundation subjects.

A significant part of the high school instruction may well take the form of basic preparation for clusters of closely related jobs, such as mechanical maintenance, or building construction, or office practice. This part of the curriculum would be derived from analysis of common basic elements of knowledge and skill found in the various jobs in the cluster. Upon graduation from high school, the student would be prepared to pursue specialized instruction in some one of the fields that make up the cluster in a post-secondary school, employer school, or apprenticeship.

A part of the high school occupational program should be special programs designed to meet the needs of students who are socio-economically handicapped, with small classes and much individual attention.

Post-high school education criteria are detailed in the report of the Ad Hoc Committee for Community-centered, Post-high School Education, Education Commission of the States.

2. *Labor Market Data.*—The state should improve its facilities for obtaining and making available current labor market data for use in occupational education program planning, and these data should be utilized in keeping programs geared to current occupational needs.

The state education establishment may well take the lead in the development of uses of the computer in occupational education.

3. *The State Education Establishment.*—

a. The service role of the state education establishment with respect to occupational education should be expanded to a size compatible with the importance of this phase in the total education program. This service may well include program consultant service to local communities, curriculum and instructional materials development on a statewide basis, building and equipment planning, research and development, statewide coordination of curriculum offerings, and efficient administration of state and federal financial aid designed for this field. In some cases this may require restructuring of the present state administrative pattern for vocational education to provide for closer integration of all state educational services.

b. The state education establishment should provide effective coordination and development of appropriate programs within the state, using conferences, workshops, institutes for leadership development, and the like, in addition to personal consultant service.

c. The state education establishment should maintain effective public relations concerning occupational education with all pertinent elements of society within the state—employer organizations; labor organizations; professional, technical organizations; civic organizations; and the like.

d. The state education establishment may well consider the development of occupational guidance service for adults, developed cooperatively with the state employment service. Well planned guidance centers where adults can go for counsel on personal problems concerning work life will be a real asset to many persons, as well as to the economy.

e. The state education establishment should take steps to bring occupational teacher qualifications and teacher education programs into line with the needs of an automated age.

4. *Financial Support.*—A financial support plan should be developed consistent with the ability of the state to provide the needed funds and secure federal and foundation funds, and with the varied needs of different portions of the occupational education program. This plan should include provision for distribution of state and federal funds on an equitable basis by types of institutions and types of programs.

Sound legislation should be enacted which clearly allocates responsibility for occupational education to appropriate agencies and which encourages the development of effective occupational education programs. The legislation should insure close coordination of all programs.

5. *Local School Districts.*—

a. Steps should be taken to increase the size of most educational administrative units to a point where it is practicable to provide needed occupational education. In some cases the county may be the best unit; in other cases larger units may be needed. For some types of occupational education programs the state itself may be the most desirable unit. In the reorganization, steps should be taken to free the school district from bureaucratic structure. Provisions for interdistrict and interinstitutional cooperation should be made and retained regardless of the extent of the reorganization.

b. Physical plant for occupational education is a vital aspect of effective programs. Venn comments on "institutionalization of obsolescence" when schools are unable to keep up with industrial changes in the replacement of equipment. State service in building planning and equipment selection in all phases of occupational education are needed. New thinking is required concerning the possible use of mobile units, portable units, and learning "stations" in business and industry.

3. *The Manpower Coordinating Committee.*—The Task Force on Vocational-Technical Education believes that the schools have a major responsibility in the field of manpower development by virtue of their responsibility for educating and preparing individuals for full participation in the economic life of American society.

"In claiming a larger role for the public schools in manpower training, we are faced at once with a multiplicity of Federal government programs, some of whose ties to both education and employment are fragile at best. While there are logical divisions of responsibility among these programs, there is also an enormous overlap. And this problem can be solved not be reshuffling, but only by the transfer of the educational components of these programs to the public schools.

"Few people are satisfied with the schools' present performance in equipping the disadvantaged members of society with the skills needed to rise on the economic ladder. The whole education system—in the large city schools, the poverty pockets of our rural areas, and even in affluent suburbia—is now in trouble. And one focus of the dissatisfaction is the schools' impotence in meeting the needs of the large number of disadvantaged students for whom the most feasible hope when they finish school is open-ended jobs. (That is, jobs with access to advancement and responsibility. Merely to offer blind-alley employment and obsolescing trades to youngsters in a dynamic technological society is to exchange one kind of subservience and dependence for another.)" (Feldman)

The Manpower Coordinating Committee's responsibility would be to effect maximum system-cost effectiveness in the utilization of the various occupational and job-training programs. Its primary function should be coordinative rather than administrative, with the actual implementation of the education and training programs being the responsibility of the appropriate agency. Planning for the future of occupational education must take into account what we have today. Some of the institutions and programs have realistic goals and are meeting the goals rather effectively. Others need redirection of goals and the development of effective implementation. An overall task as large and as varied as that of providing occupational education for the millions of present and potential American workers requires a wide spread of methods and of agencies. On-the-job training is the major path to skill development in most occupational fields. But with the increasing demands of technology in all areas, this method is being supplemented by growing numbers and types of institutional programs. These are found within and without the field of public education.

A. *Educational Agencies Outside Public Education*

Workers who advance by the pick-up method are usually helped by relatives or friends, or by helpful supervisors. Technical books and periodicals are studied or correspondence courses are taken. Some industries now provide programmed learning manuals available to workers who desire to improve themselves. Apprenticeship provides many workers for the skilled crafts, with the related study usually provided in classes operated by public education programs. The numbers enrolled fluctuate somewhat, but don't appear to be growing. In 1950, some 200,000 were enrolled in registered apprenticeships; in 1965, the number was some 185,000. These programs are sponsored by management, by unions, or by joint apprenticeship committees.

Many occupational training programs are provided by employers on an organized basis, as induction or vestibule programs for new workers, or as extension programs for updating, upgrading, or retraining present workers. Usually these programs are confined to the specific needs of the organization. Some trade and business associations operate schools of industry-wide service, such as banking. Industry provides a considerable amount of education for all levels of management.

Private vocational schools—proprietary and nonprofitmaking—provide training for thousands of persons each year, usually catering to those who desire preemployment training. These private schools often do the pioneering in new occupational fields. Auto mechanics education got its start in this way. Present programs in private schools include business courses, data processing, flying, cosmetology, electronics, diesel mechanics, and a host of other courses. The education of technicians is well represented in private technical institutes. Private correspondence schools enrolled more than three million students in 1962.

Numerous government departments operate their own training programs, and some of these enroll thousands of people other than their own employees. Some of these programs are operated jointly with the educational establishment. The U.S. Department of Labor, in cooperation with H.E.W., provides basic and occupational education through the Manpower Development and Training Act. This Act includes allowances for trainees, and permits contracts with private organizations. During the calendar year 1966, some 135,000 persons completed courses under this Act. The Department of Labor operates special guidance and placement service for youth in some 125 Youth Opportunity Centers.

The Office of Economic Opportunity administer some 115 Job Corps centers of residential type, enrolling some 30,000 youth in 1966. This Act also provides for contracting with private organizations for the operation of programs. Neighborhood Youth Corps programs provide paid work jobs for youth who need financial aid to stay in school or to return to school, and for the development of acceptable work habits. OEO also provides a Work Experience and Training Program for welfare clients and other needy persons in cooperation with the Labor and HEW departments. Numerous special programs involving occupational training are included in the overall attack on poverty.

The Economic Development Administration of the Department of Commerce provides subsidy for training programs in areas of critical employment. The Department of Agriculture reaches thousands of persons through the Agricultural Extension Service. Nearly every department of the Federal Government, and many departments in the several states, provide some type of occupational education.

B. *Occupational Education Programs Within the Public Educational Establishment*

Although the public schools are most directly concerned at present with academic education, much is being done in the field of occupational education. Such programs are found in public vocational high schools, comprehensive high schools, area vocational-technical schools, technical institutes, community colleges, and other institutions. Professional education—another level of occupational education—is largely the province of the public and private universities.

Separate vocational schools for youth of high school age are found in many states. Some of these have programs geared quite closely to the needs of industry, although perhaps the majority have included enough general education content to meet the status of vocational high schools. In keeping with the regulations of the Smith-Hughes Act, the curriculum pattern generally provides a half-day of shopwork on a useful or productive basis, one-quarter of the day of related mathematics, science and drawing, and the remainder of the day in general education. Usually the range of offerings is relatively limited, except in large cities where several schools cater to different occupational fields. Some of these schools are highly selective, with resultant excellent placement records of their graduates. Others have become dumping grounds for the less able student. The separate vocational schools are essentially outside the mainstream of education.

Thousands of high schools throughout America are of the comprehensive type, combining academic and occupational education. The larger schools may offer curriculums of business, distributive, trade, technical, and agricultural types, and may include "vocational" home economics. Small high schools—especially in rural areas—often limit their programs to agriculture and home economics. In the comprehensive high school the students in occupational curriculums mix with those in academic programs in certain classes and in extracurricular activities, and thus are a part of the mainstream of education. Work-study programs are often found in the fields of business, distributive and industrial occupations. Youth leadership organizations, such as the Future Farmers of America (FFA), contribute their part to occupational understanding. Since the enactment of the Vocational Education Act of 1963 with its more liberal regulations we are seeing the development of many curriculums geared to clusters of closely related occupations, in contrast with the programs which are usually found aimed at a specific occupation.

Since the passage of the Vocational Education for National Defense Act of 1958, with its provisions under Title VIII for federal subsidy for technician education programs in area schools, the term "area vocational-technical school" has come into popular usage. The Vocational Education Act of 1963 stimulated this development by earmarking funds for the development and operation of such programs. In essence, an area vocational-technical school is one which serves the needs of an area larger than that of the usual high school district. It may take the form of administration by a state, a county, a large city, a jointure of two or more school districts, or some other type. In pattern it may be an industrial education center, a technical education center, an area vocational-technical school, a community college, a technical institute, a skill center, or it may have some other designation. To be legally considered an area school for subsidy purposes it must provide occupational curriculums in at least five different fields.

With federal subsidy available for construction as well as for operation, in many states there had been strenuous development to get these schools under way. Some 400 such schools were in operation in 1965, 750 in 1966, and an additional thousand authorized for operation by 1975. Most of these schools are highly specialized and largely single purpose in their offerings. The new ones are modern in construction and well equipped. They have a "no-nonsense" atmosphere (as Venn points outs). They may serve high school students on a "skill center" basis, for half-time or less of the student's day. They may offer MDTA programs. They usually provide also for extension courses for employed workers.

Technological development of recent years has greatly increased the needs for technicians in many branches of industry, business, and agriculture. The type of institution designed for the training of technicians is the technical institute, and curriculums provided for such training, wherever offered, are usually called technical institute type curriculums. Such curriculums are found in separate technical institutes, in technical institute branches of engineering colleges, in community colleges, and in some area vocational-technical schools. The curriculums are highly technical in content, resembling an engineering curriculum more than that of a trade school, and require students of reasonably high intellectual ability. The programs are usually two years in length. The development of this phase of occupational education has been stimulated by the VEND Act off 1958, and subsequent acts, and it is perhaps growing more rapidly than any other part of occupational education.

The community college is growing rapidly, both in the numbers of new institutions coming into being, but also in its concern for the development of occupational education. In the early years of its development it was concerned largely with "lower division" or "transfer" programs which provided the first two years of traditional college curriculums. It then began to include curriculums of semiprofessional nature, of sufficient prestige to warrant inclusion in a college-level institution. Technician education subsidized under Title VIII of VEND then became acceptable. Although in some states vocational-industrial courses have been in community colleges for many years, in other states they have been introduced only recently. At present the general pattern toward which the community colleges are working is that of comprehensive occupational education offerings in a wide range of fields.

Technological and social change are steadily pushing upward the occupational education programs with respect to age and grade level. Post-high school institutions today are the most logical location for specific occupational education offerings.

C. *Federal Aid for Vocational Education*

This legislation has had profound effect on the development of occupational education in the various states. In order to receive federal funds each state had to set up a state plan for the operation of vocational education programs within the state, in conformity with the Federal acts. This has placed a considerable amount of control within the hands of the U.S. Office of Education. Within this frame of reference each state has developed its own program, but with considerable uniformity of pattern outlined by the Federal legislation. The first of the specific federal acts—the Smith-Hughes Act of 1917—set up many meticulous requirements, which appeared to be suited to the needs of that period. The Smith-Hughes Act is an act in perpetuity, remaining on the statute books until repealed by the Congress, together with its mandated appropriation. This Act is still in force.

All of the federal vocational education acts have provided liberal appropriations for agriculture and home economics, reflecting congressional favor for the rural areas. Several acts of short duration—the George-Reed Act of 1929, the George-Elzey Act of 1934, and the George-Deen Act of 1937—provided additional funds. The George Deen Act added distributive education to the list of approved fields; otherwise the provisions were largely those of the original Smith-Hughes Act. In 1946, the George-Barden Act was passed which provided substantial additional funds, and which liberalized somewhat the restrictive provisions. Additional funds for health education were added by a 1956 amendment. Technician education and the development of area schools were greatly stimulated by Title VIII of the National Defense Education Act of 1958. In 1962, the MDTA, with subsequent revisions added, a new facet to occupational education, in its cooperative administration between the Departments of Labor and of Health, Education, and Welfare.

In 1961, a Panel of Consultants of Vocational Education was appointed at the request of the President, and its report recommended drastic changes in legislation for vocational education. As a result of this recommendation, the Vocational Education Act of 1963 was passed, which authorized large increases in federal funds, and provided a wide revision of program emphasis. One significant feature of this Act was the section permitting State Boards for Vocational Education, with the approval of the Commissioner of Education (USOE), to transfer funds from one category to another. This makes it possible to transfer all Smith-Hughes and George-Barden funds into categories of the Vocational Education Act of 1963, thus virtually permitting repeal of the Smith-Hughes and George-Barden Acts if the state so desires. The permitted use of federal funds for construction and operation of area type programs has stimulated much development of post-high school programs, and the broadened curriculum patterns permitted under the new Act have resulted in much activity in the development of occupational-cluster programs in the high schools. The legislation also requires periodic review of accomplishments.

The occupational education programs sponsored under the Office of Economic Opportunity and those of MDTA lean heavily toward on-the-job training.

4. *The Task Force for Occupational Education and Economic Development.*—The responsibility of this Task Force would be to help build up the state's industrial output through new or expanded industries. This would be done by means of providing information to assist industries in considering the state as a site, providing a pool of trained workers, and/or making available undeveloped (or underdeveloped) workers who can be trained for jobs provided by new industries.

5. *Regional Learning Centers.*—The responsibility of these Centers would be to provide leadership in development of broad, interdisciplinary curricula that are responsive to the needs of society and the individual, and geared to the resources of the region. The Centers, placed regionally within the state in intermediate district offices or otherwise, would provide the link between the Human Resources Council (and Occupational Education Commission) and the local community Advisory Councils on Vocational-Technical Education—interpreting the goals on the one hand and assessing regional resources on the other so as to lead in curriculum development designed to achieve the goals. Two basic premises provide the rationale for the Centers:

> A. Transmitting meaningful *knowledge* to others and developing in others the *intellectual and communication skills vital to learning* requires special scholarship and understanding of human potential, and teachers and students should be protected and encouraged in these rigorous and demanding activities by *leadership and environment* which frees them from other concerns and objectives.
>
> B. The development of skills, values, attitudes, and competence in such important matters as *self-government, job-training, cultural, and social pursuits* can be most successfully achieved, and therefore should take place in the environment where they are sustained and "under the tutelage of the best performers." Such development cannot be accomplished satisfactorily or economically if it is limited to instruction in the simulated or isolated environment of a school building.

APPENDIX B

THE INITIAL TARGET POPULATION

Proposal No. 2 of the Task Force report calls upon the Occupational Education Commission to identify school dropouts, potential dropouts, and unemployed and underemployed adults. It is not necessary to describe this population at length. It is generally known that current educational practice does not motivate nor serve the youngsters represented by the 20% high school dropout rate and the additional large number of those who are "passive" about our present offerings. Only 20% of our young people are graduating from college. If present trends continue, by 1975, 32 million persons in our labor forces will not have completed their high school education.

"Young people are entering a technological world of work unequipped with the tools they need for survival. More than a million of them are now out of school and out of work, and, given the circumstances, this figure can but continue to rise." (Venn)

"Every serious concern about the human condition in America today—about poverty, unemployment, racial discrimination, juvenile delinquency, the fear of walking the cities' streets at night—must center on *the building of new bridges between American learning and American doing, bridges that everyone can cross.*" (Wirtz)

These individuals, identified by the most appropriate means in each state, would constitute the initial target population for programs that emphasize the related school and community contexts for education.

This proposal, however, is not intended to be limited to "crisis" or "crash" programs. The Human Resources Council would be responsible for working through its Commissions to establish, maintain, and nurture pilot programs with a view toward individualized learning experiences that use broad-based resources becoming normal educational practice with all youngsters and adults. Occupational education is proposed as the first area for concentration because specific training and job entry is of key importance to the initial-target population. Education in the other areas—cultural, social, political, and intellectual—can also take place more effectively in related school and community contexts and Human Resources Councils are called upon to attend to those areas as quickly as possible, drawing upon their experiences with immediate efforts in occupational education.

APPENDIX C

VARIATION AMONG STATES—VARIETY OF APPROACHES

The legal responsibility for education rests with the separate states, and each state has unique potentials, resources, and problems. Consideration of the proposals presented in the Report of the Task Force on Vocational-Technical Education, therefore, will be given in the light of a great range of perspectives held by states.

One way to classify state characteristics into categories is by the nature of the population distribution within states, i.e., whether a state is basically metropolitan, urban-rural, or rural. This is a particularly useful classification when occupational education programs are being considered because the diversity of employment and population found in large cities, small cities, and rural areas calls for varied types and levels of programs.

When determining the approaches it will use in considering and implementing the proposals in the Task Force Report, the states should note the following:

1. Depending upon the population distribution within a state, the nature of the agencies with which the Occupational Education Council and their Local Advisory Committee Council counterparts will concentrate their efforts may range from the Grange (in rural states), to the AFL–CIO (in metropolitan states.) The state agencies with which the work is done will vary, too, depending upon the relative strength of certain Departments as a result of emphases given different areas in the past.
2. Depending upon the population distribution within a state, the way in which the state organizes the councils, commissions, and committees proposed in the Task Force Report will vary. It may be that some relatively rural states whose Departments of Education and other Departments are small, and where communication and working relationships with local schools and communities are not complex, will want to establish only a Human Resources Council and provide for subcommittees of that group to perform all the functions proposed for the Occupational Education (and social, cultural, political, intellectual) Commission as well as for the Manpower Coordinating Committee, and the Task Force for Occupational Education and Economic Development. The urban-rural states may want to establish both the Human Resources Council and Occupational Education Commission but leave manpower coordination and occupational education-economic development as subcommittee functions for the Occupational Education Commission.
3. Pilot programs should concentrate initially upon specific problem areas (congested areas in cities or sparsely populated rural areas, for example) but include as soon as possible, areas throughout the state that are representative geographically and by community-size categories.
4. Depending upon the extent to which a state desires and/or finds it necessary to be a highly industrial one, it will want to adjust the emphasis given to special occupational education services relating to industrial development as described in Proposal No. 4.

Mr. **Minear.** I will comment briefly on the two-page statement. I was asked to make a statement from the viewpoint of a State superintendent of public instruction and a State department of education about what needs to be done with the Vocational Education Act of 1963. I think it is very simple.

My recommendations really boil down to several and that is we believe the act should be simplified and we believe it should be extended. There is not enough money to do the job the act originally envisioned and within the act there are 23 different programs and 20 seperate fiscal accounts which must be kept.

I find in my program, people are constantly having to interpret programs to my fiscal people or keep records separately in order to abide by the law, Public Law 88–210.

In other words, I am saying it is too complicated. There are too many different matching ratios in the law, so that for one program the State, local and Federal matching ratio differs from the other. This makes for complication.

So I plead for extension of that act, more funds into it, and simplification of the act.

Mr. Chairman, I now turn my comments to another document which you have before you which was developed by the Education Commission of the States, a new organization of which I happen to be the chairman of the national task force on technical vocational education.

I think in essence this report is not unlike the report which the President's Commission, chaired by Dr. Melvin Barlow, of California, has or will present to this group. May I say that this particular proposal calls for a reorganization of secondary education for some of the very reasons that the previous speaker mentioned.

Secondary education has never faced the fact that it was originally an academic college preparatory institution and that now it has all of the children of all of the people in school most of the time. Thus the kind of educational program that was available around the turn of the century that educated 10 to 20 percent of the young people to go on to college is not now found acceptable when we keep all of the children in school through age 18 or high school graduation.

After the flareup in the Watts District of Los Angeles, the Newark riots, and subsequently the Sunset Boulevard riots in Los Angeles and Hollywood where we find that white boys and girls, not colored boys and girls, were turning cars upside down, when we found snipers on the roofs in some of our ghetto problem areas turning out to be white people and not black people, we said to ourselves in Oregon and the compact of states said, "What does this mean for American education?"

We felt that the secondary school program needed to be redrafted and the paper you have before you entitled "Changing the Context Within Which Vocational Technical Education Operates" is a first report, and I might say it is a committee report, of an approach to this problem. I say it is a committee report because I suppose you have heard the old comment about a camel being a horse put together by a committee. Sometimes I think when I read this paper and try to simplify it the same thing is true.

May I say this to you? We think, broadly speaking, we would like to attempt, on some pilot basis in the various States, restructuring secondary education. First, we believe that some very simple obvious things are necessary. The schools are closed in America more days than they are open and in a day when the typical secondary school is open it is closed more hours than it has students within it.

We have found that the general educators have gone a long way toward developing individualization of instruction. Indeed, with program learning, machine teaching, and a number of other techniques developed in education, individual instruction along with the so-called automated classroom is now possible.

We are suggesting to our 50 Governors a complex of organizations, which appears in the first few pages, to establish a survey of the educational and vocational education needs of their States. The kind of commissions, committees, and structures for this purpose would vary from State to State, depending on population of the State.

We are suggesting they take a look at the school system as it operates. One of the things that has been mentioned here this morning already is the dropout problem. We are suggesting and have suggested to the 50 Governors that the educational system of their State should provide for flexible termination of education, not necessarily termination at grade 12 or a specific age. We are suggesting also that the high school system should provide reentry programs.

Thus when a youngster may drop from school at an earlier age than 18 or high school graduation he is normally not welcome back in school and he knows this, so reentry systems we think are important.

Flexible termination is important for vocational education because young people are not acceptable on the job market automatically on June 15. Indeed, some youngsters are demanded on the job market in January, some a year before graduation, and some perhaps a year or two years after their formal graduation age would have occurred.

We think also that the States should pay more attention to their graduates and there ought to be an organized followup program not only of the college-bound youngster, but of the vocationally placed youngster; and we feel that this kind of information should be fed back into the school system and the school system should be modified in direct proportion to the success or failure of its graduates or the young people who leave it.

Mr. Chairman, the compact of States is very simply trying to break the formal school structure that we feel now does damage to some young people. I don't know of a better way to teach algebra, English, literature, American history, than some of our teachers now practice, but we feel by keeping young people in such a closely supervised structure until age 18 that many of these boys and girls are not availing themselves of the proper opportunities for education that are available outside of the school.

Indeed, all of education does not take place in the four walls of a school. Many of our psychologists tell us that only a minor part of an individual's education takes place in the school.

He learns many things outside of the school. If you went through this paper and boiled it down to some simple elements, you would find the most significant proposal the education commission of the States has made to the Governors of the 50 States is that the States become structured so that they can develop in each of the major communities pupil learning stations that are not necessarily duplicates of what is available in the four walls of the school.

Let me say as machine shop teaching was mentioned, if a young person needs introduction in how to operate an engine lathe, we probably should provide such equipment within the four walls of the school.

However, in the broad families or the occupational clusters, it becomes quite obvious early that most communities of our Nation, not all, but most communities, cannot afford to replicate within the four walls of the school all of the vocational training needs or facilities that they would like to have.

Indeed, the average high school in the country probably has fewer than 400 students. Such a high school, if it cannot avail itself of area vocational facilities, and these are very few and far between in this country, finds that it does not have facilities available for vocational training other than the type that can be given, and this is very necessary, concerning general backgrounds and attitudinal behavior.

We have suggested that occupational education commissions of the various States be formed and that they, together with employers, who seem to rush to us after the Watts district situation with jobs for these people, try and isolate some learning opportunities in the community.

In this regard, we differ markedly from our European counterpart school systems. In Germany, for example, they have gone far beyond us with the young people who are not bound to the university and who are not in the gymnasium, which is their academic preparatory school, in developing their apprenticeship program. At age 15 in Germany, from age 15 to age 18, young people are actually engaged a major portion of their time in occupational training of various kinds. You can call it on-the-job training, if you will.

In Germany, they do not have what the previous speaker urged, and that is related academic instruction, and I would agree with Professor Kaufman. Their training there is on the academic basis. It follows the vocational experiences of these young people and tends to be more like our continuation high school; more reading, writing, and arithmetic.

Mr. Chairman, the States of the Nation that formed the education commission number 40 that have adhered to the compact by action of their legislatures. They are deeply concerned with the direction of secondary education. They feel, certainly, that secondary education needs to be restructured and needs to approach the problems of the big cities. I will be glad to provide for your staff a third document which is entitled "Proposed Vocational Education Projects for Special Task Force Effort," which we are undertaking in Oregon in our major metropolitan area, which has been made possible by prior acts of this body and of the Congress.

With the money made available to us, we have been able to structure a number of programs in our so-called ghetto area.

Mr. Chairman, because of the time, you may wish to ask me some questions. I would say that we are looking for greater flexibility. We are looking for greater innovation possibilities to approach this problem. The vocational educational programs that we sometimes refer to when we talk about the world of work, need vast redrafting. It is possible that the ideas can come from a central source, the Federal Government, or people working in it.

I would plead with you that not only perhaps should this be possible, but the 50 States certainly provide, if they have adequate leadership, a wonderful base for innovative ideas. I mention this third paper because it will show you some of the things that one State department of education, namely Oregon, is able to do in its metropolitan area, specifically Portland.

Mr. Chairman, we are looking toward doing many of the kinds of things Mr. Kaufman mentioned in a CORE-course program at the junior high level, but in addition to this we are looking toward a much greater expansion of contacts with the industries and businesses of the State.

With the ideas advanced in this paper, my State department of education looked at three communities in our State, a conservative area, a very liberal progressive area, which Congressman Dellenback represents, and the metropolitan area. We have made more progress in the conservative area than in the liberal area. The mid-Columbia five-county district along the Columbia River east of Portland, specifically the communities of Hood River and The Dalles, have formed much of the content of this paper on an experimental basis. We have had communitywide meetings in which all of the employers in the communities I mentioned have been present and we have said, "Look, if the high school and junior high school programs of these communities don't work, as superintendent of public instruction it is within my prerogative to waive some of the standards of the State board of education. Let's get on with the business of educating young people. What is it that they need to know that they are not now getting in the schools?"

These communities have formed three or four councils. One is an occupational council, and they are working together with the schools in a release time program to try and bring some contact with the world of work to these young people.

They also have another council. How do we teach young people about American government? We find that many boys and girls, after going through the U.S. history and civics courses, seem to have only a meager idea of how we govern ourselves, and we are concerned with this, and we are trying an appropriate council of people who are engaged in government to provide some young people with experiences in and around government that will supplement their academic work.

We are also doing the same thing in breaking open the school system to the community in the field of fine arts. Other fields may be added in these communities. We feel that too long the school has been an isolated structure, and this has been true in vocational education. If you had a woodshop or a machine shop in school, you had vocational education.

As was alluded to by the previous speaker, there are literally tens of thousands of different kinds of occupations, and the schools of our State, the schools of the Nation, cannot put all of the training facilities or all of these kinds of jobs within the four walls of the school.

We have to learn to work with the community to provide this kind of training.

Mr. Chairman, I think this concludes my remarks. If you have any questions, I will be glad to answer them.

Mr. **Hawkins**. Thank you, Dr. Minear.

Mr. Dellenback.

Mr. **Dellenback**. Thank you, Mr. Chairman. To go back to your first condensation, Mr. Minear, of some specific suggestions. You here dealt in terms of simplification and extension of the present act.

Here, on the Federal congressional level, we keep facing the hard problem, which is something like Professor Kaufman's question of priorities. It is a case where we have so many things that we should or could help with, and the question arises of exactly what should we be doing.

I notice that of these suggestions that you made on page 2 a number of them deal with additional Federal funding. You talk about extending the act not only in substance but in dollars. I assume, and am I correct in this assumption, that you are suggesting increased Federal funding be made available?

Mr. **Minear**. The original authorization, I believe, has not been met with the appropriations. The original authorization would have put us considerably beyond where we are. We face the fact at the State level as the National level is faced with inadequate resources and we fully understand this.

Mr. **Dellenback**. If we have to sacrifice something would you have any suggestions as to where we might make cuts in Federal spending in other fields so that we can expand Federal spending in this field of vocational education?

Mr. **Minear**. I wouldn't have because I don't have the knowledge you have of other fields. You are speaking, I suppose, of the education field?

Mr. **Dellenback**. Education field or noneducation field. As you realize full well, that is part of the problem that we keep facing. Some of us who are deeply concerned about education, and vocational education is one of the critically important areas, would like to have considerable expansion of Federal funding.

When we face that question we have to be realistic enough to realize what sort of a Federal budgetary deficit we face and we either go on further in that or we talk about raising taxes to get additional funds or we talk about cutting somewhere else and I wondered if you had a choice as between at least those broad fields that you would express a preference on.

Mr. **Minear**. Congressman Dellenback, in my State, of course, I am engaged just in the education field, but have often wondered why it is that we have such beautiful highways and you will have to admit we have some wonderful freeways. I think the highways are much better built, much better constructed, and represent a much higher level of societal endeavor, than the comparable endeavor in the field of education.

Now, I recognize, of course, the obvious; that safety is involved. We worry about the facts that we lack the funds for some simple education programs. One of these would be driver education to train the people to drive on those beautiful highways.

I would not be so bold as to suggest to the Congress that this may be the place, but I do have the feeling that some of our relative values ought to be examined.

Mr. DELLENBACK. I really wish again there were more time to talk about all of these because you do recognize part of the problem that we face here and it is a difficult one for us. I repeat what I said a minute ago, I am convinced that indeed a key to tomorrow lies in education and that it is fundamental, and vocational education is, I think, the neglected child of education as of the present time.

The suggestion that you made about providing for appropriations and verification if availability of Federal funds at an earlier date, I think, is a mechanic that we must move forward on.

You know the situation in Oregon—I am sure that every State of the Union faces this to a degree—of the last-minute, hairsbreadth funding of education programs with some consequent complications in getting personnel and laying programs out, and I think we must do this sort of thing without any question.

When you talk about decreasing the regulations governing the use of Federal vocational funds and talk about eliminating specific matching purposes, I would ask the questions: Are you here suggesting that we eliminate matching of Federal funds with local or State funds or are you here suggesting that the matching be on a general rather than a categorical basis?

Mr. MINEAR. No, sir; I am indicating that there are too many different matching ratios that put an undue burden on the offices in keeping records. For a long time we had 50–50 as a matching ratio. Fine. But we have gone to other kinds of matching ratios and they differ by program.

I think we ought to hit a funding level, if it is 50 percent, and keep it for all of our vocational programs instead of having it 75–25, 60–40, and so forth.

Mr. DELLENBACK. So what you would really suggest is that we shift control over choice of priorities back toward the State level and away from the Federal level because when we change ratios we are, in effect, on the Federal level, saying this is a program we have to move forward in because we have a 90–10 ratio and we think where we give 75 it isn't quite as important and maybe where we give 50 or 25 it is still less important, and thus indirectly we urge the local areas to move in the direction of the area where they get the majority of the funds?

Mr. MINEAR. I think that is right. It is very difficult to pass a general law for the 50 States of the United States. You have had lots of years of experience with the State vocational education directors. You can rely on the fact that they have to provide training—specific training—for jobs that are available within the State or the region. They are not going to be putting their funds in areas where there are no occupational outlets for youngsters.

If you recall, Congressman Dellenback, we have quite a program in Oregon for choker setters. We train choker setters in Oregon. I would dare say the previous speaker would have a tough time with that. I might be doing him a disservice but in his particular service area of the country he probably hasn't had much experience training choker setters.

Yet here with about 8 to 10 weeks we provide occupational training, an entry job into the forestry business. We would not be doing this if it weren't for the fact that that is where the jobs are.

Mr. DELLENBACK. But you do feel that it would be highly desirable in this area of vocational education if the Federal Government cut down on the specific categorization of aid and moved in the direction of turning back toward the local areas, whether it be State or whether it be local communities, more of the selection as among programs, as among priorities?

Mr. MINEAR. Yes. I would commend to this committee title I of Public Law 89–10 as being a good example of Federal-State coordination and cooperation. The guidelines from the legislation, from the laws, say the money is to be spent for this broad purpose.

The State departments of education may, together with local districts, determine the specific purposes as long as they are within the broad guidelines. Title I does not use a State plan. I think the State plan concept is good where the U.S. Office, for example, wants to be involved more and I have no objection to the U.S. Office being involved under the State-plan concept.

We objected strenuously to title III of Public Law 89–10 which would direct Federal-local, because this tended to bypass and duplicate and provide some internal operating problems within the State.

The State plans that are now established in the Vocational Education Act, I think, are fine. This gives me a chance to say to the U.S. Commissioner, "Here is how we will spend this money."

These plans are developed with the superintendents, the local superintendents of the State. It is a joint effort. We submit a plan to the U.S. Office. They accept this and they differ from State to State, depending on the needs and desires of the State, and then we operate under that.

I think this is excellent.

Mr. DELLENBACK. In your experience this has brought forth innovation, this has brought forth creativity?

Mr. MINEAR. I think it has. I think I can point to this document as some creativity under the existing Federal statutes, Public Law 88–210. I can point to the innovative and development projects in general education that are available under Public Law 89–10, title I.

I have been one of those individuals who was privileged to read the proposals that came to the U.S. Commissioner under title IV from the various colleges, universities, and districts, and I think it is fine to set aside a portion of money for use of the U.S. Office of Education.

I think the great bulk ought to be State planned or ought to use the title I technique of aiding.

Mr. DELLENBACK. Thank you very much, Dr. Minear. Thank you, Mr. Chairman.

Mr. HAWKINS. Dr. Minear, on page 2 of your two-page statement at the top of the page you speak of the funding of such programs as OEO and the MDTA and then you say, "The added benefits associated with some of these projects promote drop out of students from regular, and more suitable, programs to get into special programs * * *."

Would you amplify your remarks concerning that and would you have any documentation to present that would, in effect, indicate that in the type of funding we provide in these programs that in a sense we encourage dropouts from the regular school programs?

Mr. MINEAR. Yes. Let me give you an example. We have many Job Corps setups in the State of Oregon, probably more than in any of the other States. If you are a high school student doing a fair job and you are age 16, 17, or 18, something of this sort, and you go to high school, you cost your parents money.

However, if you will drop out of school and get in the Job Corps the Federal Government will pay you money. That is what this gets at.

The MDTA programs are somewhat the same.

Mr. **Hawkins**. Do you have any recommendations to make as to how we can avoid that, how we can on the one hand reach the youngster who isn't being reached and who does obtain a program in the Job Corps and at the same time not encourage the individual in regular schools to drop out?

Mr. **Minear**. Under the way these two programs operate I have not been able to determine a feasible alternative. Obviously the 100 percent funding that is necessary for the Job Corps programs is going to have to be maintained. But when a young person age 17, let's say, has to face a difficult home situation, and many dropouts come from difficult home situations, where he is a drain on mother or father or perhaps where he hasn't a mother or a father, he has the alternative of registering in the Job Corps program.

The only alternative that I see to this kind of a thing is the type of funding for high school youth that we now have in the Job Corps and I would submit this is hardly feasible.

Mr. **Hawkins**. Is it a matter of funding or is it a matter of the failure of the school to retain the interest of this youngster? Wasn't this youngster who goes to the Job Corps, in a sense, rejected by the regular school system and it isn't a question of the funding of the school system, but rather the failure of the school system to retain this youngster's interest?

Mr. **Minear**. It could be partially but I think only partially, Congressman. For example, if you were trying to learn electronics in the city of Portland and your dad was having a tough time paying his bills, you might find that you could go to the Job Corps program and learn electronics and they would pay your room and board as well as the cost of tuition, your transportation, and a few other benefits.

It becomes financially attractive, you see, to some marginal youngsters to drop out of school.

Mr. **Hawkins**. I did have one other question, but because of the time, Mr. Minear, I won't ask it. However, may I merely ask this?

You spoke of the learning opportunities in the community and the development of the concept of pupil-learning stations. I am wondering if that concept is developed in this larger document that you have presented to us, because it is a most interesting suggestion and if you haven't developed that concept in this paper we certainly would like to have further information on it.

Is it included in these recommendations?

Mr. **Minear**. Yes, it is and any of the vocational educators know the term. If you remember the DE, the distributive education, the diversified occupation program, which we currently have, this envisions a huge enlargement of that particular kind of program and it is not an expensive program.

Mr. **Hawkins**. Mr. Chairman?

Mr. **Pucinski** (presiding). I just wonder if we might ask both Mr.

Kaufman and Mr. Minear if they care to make any comment on the relationship between the programs at the secondary level and the post secondary level? Can't you separate the two or do you feel that they are all closely intertwined and should be working together?

Mr. MINEAR. I realize this is a dilemma, if I may speak first as long as I am here, which not only you face but we face it in the schools. It is my opinion that vocational-technical training should be available, needs to be available, at the time the youngster begins to recognize his needs and begins to express some desire to have it.

If we relegate all vocational-technical education to a post-high-school situation in order to make the liberal arts people or the academicians happy, we will find then that about 30 percent of the youngsters, and in some States, indeed, 40 percent, will never get that far.

We need to provide vocational training at the age level where the yongster demands it or else he won't be in school to get it later on, so I think it needs to be in both places.

Mr. PUCINSKI. Mr. Kaufman, would you care to comment on that?

Mr. KAUFMAN. I am going to provide an unsatisfactory reply but I have a comment to make and that is, there is developing in this country these postsecondary institutions. They may be called technical institutes, community colleges, junior colleges. They are growing by leaps and bounds.

We hear the figure that one a week comes into being, which is a large number. The thing that concerns me is that the vocational educators have not sat down with the postsecondary educators and come to some understanding as to the particular roles that each institution ought to play and instead what we are going to find in and around the States is an awful lot of duplication and misconceptions of appropriate roles.

I think, for example, that we find in some places that duplicate institutes are being set up with identical types of machinery. There is no reason why we should have two different institutions, one which might have the same equipment for the secondary school and one the same equipment for the postsecondary, not talking with each other, each having a different set of objectives, and I think this is the more vital thing, to discover the precise roles of these institutions and use of funds in the most effective way.

Mr. PUCINSKI. You said at the outset that you weren't going to give me a satisfactory answer. You gave me precisely the answer I was looking for. I think that you are absolutely right.

Mr. Minear said that if we were to put all of our eggs in the postsecondary basket some 30 or 40 percent of the youngsters would never benefit. It would seem to me that the thing that we ought to be exploring here very carefully is how to shore up, firm up, your secondary programs as both of you gentlemen have so eloquently stated today, and then those who go on to the postsecondary programs have a multitude of options to go into.

One of them, of course, is the private training school sector which we have in this country. We have this huge setup of all sorts of private training schools geared to their own particular discipline, geared to their own particular trade or vocation, and it appears to me that youngsters who want to go on beyond the secondary level should be encouraged to find a great deal of further training in these private schools. But I agree with you, Professor Kaufman, that suddenly now they are going to give you something new in postsecondary education and I am becoming very weary of pouring all the money that we have been pouring into the postsecondary education when it seems to me that the real problem right now exists in secondary education.

So there has been some talk on this committee of sort of pulling postsecondary out of this bill and treating it separately; and I can't think of anything more catastrophic, particularly in the light of your testimony here today, than to try and treat this subject as a separate matter.

If there is ever an invitation for a huge waste of taxpayers' money in my judgment it is to separate postsecondary from secondary in discussion of a vocational program. I think, Dr. Kaufman, you made a good point. We ought to ask, "What is the role of each?" and then bring them closer together so there is some follow through.

I would like to thank both of you gentlemen for your tremendously impressive testimony and, Dr. Kaufman, your survey, your study of vocational education, certainly should serve as a basis for our work. And I am serious when I ask you to give us some suggested language.

We are going to have a new administration bill here very shortly and when it comes up I would like our staff to send you a copy and, Mr. Minear, I would like to have you get a copy also. You can be most helpful to us by literally taking the language and using your own license to rewrite it in any manner you feel that would do the kind of things that you have been telling us about today.

That is where, it seems to me, we can get some good suggestions for Congress.

Mr. Jennings?

Mr. JENNINGS. No questions.

Mr. PUCINSKI. Mr. Rockefeller?

Mr. ROCKEFELLER. I was wondering if either of these gentlemen would care to tell us whether vocational education funds should be spent in the critical area of disadvantaged youth or whether these dollars should go principally to the 45 percent of the spectrum described by Professor Kaufman?

Mr. MINEAR. It is very difficult to say either—or because in this country many of our finest craftsmen come from some pretty good environments and they probably are not in the disadvantaged area. I recognize the problem of the disadvantaged youngsters. When funds are limited that becomes a very difficult choice.

I think, however, in practice it would be very difficult to operate a vocational program, vocational-technical program, either at the post high school or high school level, if one aimed at just that particular group because much of our money is going into equipment, teachers' salaries and whatnot and most schools wouldn't have enough disadvantaged youngsters to operate an entire program.

This would not be true, of course, in the large eastern urban centers where you have many, many thousands of youngsters in the secondary school, but in most of the country this would be very difficult to pull apart.

Mr. ROCKEFELLER. Thank you. Professor Kaufman, do you have any comment?

Mr. Kaufman. My general response to this kind of question is as follows and follows pretty much what I indicated before: I feel that we have been passing an awful lot of legislation and appropriating large sums of money without pulling it all together and deciding what are precisely the objectives for this legislation, do we know whether or not they are being achieved, and what priorities must we give to them, and the whole issue of priorities is the toughest problem I think that could be faced.

I do feel, however, that some of the things that at least I have been suggesting are such that we should not suddenly pour all the money into this. I would rather see many experiments tried in different directions and then discover which approaches tend to be successful, which approaches tend to be unsuccessful, and then invest the money in those areas that turn out to be successful.

Now, if the States and localities would be innovative and creative and each State would try something differently, I am perfectly willing to take a broad buckshot approach but carefully evaluate the particular programs to see that they have or have not been successful.

So I see a need for the financing of a lot of experimentation, for the disadvantaged, the group to whom education is not relevant, for the vocational student and maybe even the college prep student to try to find answers to a lot of problems. I happen to be concerned about simply the outpouring of funds on some general notion that this looks good or appears to be good and then these things get built into our whole system and we never recover them whether we know they are good or not good.

This is why, as you may have noted from my statement, though there is just a passing reference, we have been carrying on a good deal of work on cost effectiveness and we have done a preliminary study of cost effectiveness in vocational education, and I would particularly like to see the whole thing approached in this way over this whole period of time.

Mr. **Rockefeller**. Do you think this suggests a need to consolidate Federal program authority for vocational education and training within a single agency which would be responsible for manpower as well as vocational education?

Mr. **Kaufman**. Absolutely. In fact, there have been some bills introduced both on the Senate and House side designed to create in the legislative side of the government what is being attempted in the executive side; namely, a program-planning-budget system, and this is something that has interested us at Penn State a good deal, of trying to say, "Well, here is this whole gamut of approaches. What are we trying to achieve? How do we know we are achieving it?" and make sure that those that aren't working are thrown out and find new ways of doing it, but we need a lot of experimentation.

Mr. **Rockefeller**. Thank you, Mr. Chairman.

Mr. **Pucinski**. Miss Pearlman?

Miss **Pearlman**. No.

Mr. **Pucinski**. Gentlemen, we are very, very grateful to you for your contribution. Mr. Dellenback?

Mr. **Dellenback**. No.

Mr. **Pucinski**. Thank you very much.

Mr. **Kaufman**. Thank you.

(The following letter was submitted for the record:)

HERLONG, CALIF., *January 22, 1968.*

Hon. HAROLD T. (BIZZ) JOHNSON,
House of Representatives, Washington, D.C.

DEAR MR. JOHNSON: I was honored and pleased with your letter of 8 January requesting my views on legislative programs in the field of education. I am in general accord with the legislation enacted during the last five years. It will surely result in many long range benefits.

There is still a major need, however, for provision for vocational training in small high schools. It is my experience in 23 years of teaching that the vocational survey courses do not prepare the high school graduate with a sufficient knowledge of the trades and crafts to be employable. It is my firm belief that much of the present difficulty in finding jobs for youth could be handled most efficiently through the state educational systems in much the same manner as academic preparation for college. I am not in favor of such vocational programs being handled under the poverty label or as part of the poverty program. In addition to this thought, I would like to see a supportive scholarship and loan program for post high school vocational training similar to that now available to college students.

For the past six years, our Herlong High School has engaged in a cooperative work experience program with the Sierra Army Depot whereby youth receive school credit for working in non-pay (learning) and pay status at the depot. This program has been enthusiastically received by parents, students, and depot officials and has served to enrich the curriculum of the high school.

Follow-up on students who participated in the academic pay phase for the five years from 1960–1965 showed the following summary result:

Followup graduates of Herlong High School work experience program, 1960–65

Junior college	13	Own business	2
Business college	3	Office work	8
Beauty college	2	Technical trades	2
Barber college	3	Housewives	16
General labor	9	No report	10
Military service	7	Unemployed	2
Under police jurisdiction	1	Death	1

For the first and only time since 1960 we were not able this Fall to operate the pay phase of the program because of the manpower ceiling restrictions on Sierra Army Depot civilian strength. It now appears that we cannot offer the students a school supported work experience summer program for the same reasons. Any assistance you could give to exempting student educational programs from manpower ceilings would enhance vocational training and be appropriated by the community of Herlong. Ninety-nine students per year from Susanville and Herlong would benefit from the decision to except students from manpower ceilings. As a second priority, it would be most helpful to have these student hire programs, in this situation, released from the nepotism restrictions.

Should you want more information on a program which has proven successful and which should be expanded through increased support from the state educational system, please let me know.

Yours sincerely,

RONALD L. BASSETT.

(Whereupon, at 12:10 p.m., the subcommittee was adjourned.)